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ABSTRACT

The resource guide was designed primarily for teachers in British Columbia and provides information for working with mainstreamed learning disabled children. The guide is divided into the following eight topics (with sample papers in parentheses): learning disabilities ("Myths and Realities in Learning Disabilities" by W. Cruickshank, "Learning Disabilities--A Critical Look at Methods of Assessment and Remediation" by W. Hawke); elementary classroom teachers ("Cloze Procedure" by R. Wilson, "Detection of Children with Learning Disabilities" by B. Reid, "Hints for Teachers of Learning Disabled Children" by N. Munro); elementary learning assistance teachers ("Educational Planning Based on Diagnosis" by J. McCarthy, "The Person Called Learning Disabled and Behavior Disordered" by Reynolds and Birch); secondary classroom teachers ("From a Parent--What is Being Done" by D. Kronick); secondary special programs ("Excerpts from Peer Tutoring Handbook" by E. Gilchrist); administrators, coordinators, principals ("Educational Program Planning Model" by R. Parker, "Evaluation of Role of Supervisor of Special Services" by R. Parker); and parents ("Guidelines for Parents, Teachers and Volunteers" by B. Reid). Among appendixes are lists of materials available in language arts, math, science and other areas; lists of publishers of educational materials, organizations, and periodicals in the field; as well as a glossary of terms. (PHR)

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The Learning Disabled Student in the Regular Classroom

A RESOURCE GUIDE FOR TEACHERS

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MINISTRY OF EDUCATION,
SCIENCE AND TECHNOLOGY
SPECIAL PROGRAMS BRANCH

The Learning Disabled Student In the Regular Classroom

A GUIDE FOR TEACHERS

Ann R. Vicente
Editor

Victoria, B.C.
1979

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> Goal of Teaching "— a student with a positive self concept and productive interpersonal relations who pursues his/her own interests as well as those interests and skills he/she would never have discovered without expert teaching"
>
> Madeline Hunter
> Instructor, 1977.

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I. Introduction

This resource guide was developed to help the teachers of British Columbia deal with the increasing number of children identified as learning disabled who are in regular classrooms, special classrooms and learning assistance centres.

The growth in the use of the term "learning disabled" has given concern to professionals and parents who find, in research and literature conflicting information on diagnosis, assessment and treatment methods. It should be accepted at this time that these conflicts are healthy and will continue to provide a range of alternatives for those concerned with a child who has learning problems.

Because we have included material from a wide variety of sources, some conflicting statements will occur. It is assumed the reader will use the suggestions appropriate to his situation and keep data on their effectiveness for future use.

An attempt has been made in this volume to answer some questions of teachers, administrators and parents about children with learning problems. Methods and materials are noted and suggestions for their use are within the framework of the learning assistance model in British Columbia.

Whenever possible, special needs children will remain in the regular classroom with their peers and a trained teacher. The teacher will have the support of a learning assistance teacher who will provide assessment, direct services when needed in the classroom or learning assistance centre, and consultations on methods and materials.

This resource guide was designed to help practitioners. Please let us know of its' effectiveness and send suggestions for improvement.

How to Use This Resource Guide

As the materials for this guide were edited and categorized, it was found, like the delightful children with whom we work, that some things fit in more than one section and others didn't seem to fit anywhere. So, arbitrary decisions were made.

The guide assumes that learning assistance teachers will read the general and regular classroom teacher sections before pursuing the more technical section designed for them. Secondary teachers should remember that many methods and materials recommended for elementary are also appropriate for older students with learning problems.

It is hoped most readers will have an opportunity to read the entire volume and make discoveries pertinent to their concerns.

II. Learning Disabilities What Are They?

A national publication prints an article about a student who committed suicide out of frustration (Jones, 1977). A recognized leader states "The field of learning disabilities is in a state of chaos" (Cruickshank in Caron, 1975). A doctor states "There are many children coming to the primary grades with a lessened readiness for learning. However, to call these children learning disabled is a questionable thing to do". (Hawke, 1977.) Obviously, the answers have not been found to the puzzle of children with learning problems.

A variety of definitions are used today. The working paper of the Canadian Association for Learning Disabilities is still being discussed and debated across Canada by parents and professionals. In October, 1977, Dr. W.M. Cruickshank suggested the following as the Canadian definition:

> "Learning disabilities are a specific subset of the populations of children and youth with learning impairments. Learning disabilities refer to those problems in children and youth of any age, of any etiological origin, and of any intellectual level which are the result of perceptual processing deficits which in turn are the result of a (diagnosed or assumed) neurophysiological dysfunction occurring at prenatal, perinatal or post-natal periods of development and which adversely affect academic school achievement, social adjustment and secondarily emotional growth and adjustment."

Before this definition is finalized a great deal of input will come from Canadian professionals.

The US Congress' definition of children with specific learning disabilities in Public Law 94-142 (Section 5(b)4) is an example.

> "Those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, of mental retardation, of emotional disturbance, or environment, cultural or economic disadvantage."

The characteristics of children embraced by such definitions could exhaust almost any supply of adjectives. In testimony about Public Law 94-142 one congressman noted that there are 53 basic learning disabilities identified by research, that one person has identified 99 minimal brain dysfunctions, and that, "No one really knows what a learning disability is." (Congressional Record Daily Edition, 1975).

This resource guide will try to use practical terms to describe childrens' problems and make suggestions about how they may be helped. So literature quoted will cite theories of causation but we will rely on Fleming's (1976) statement on causation theories.

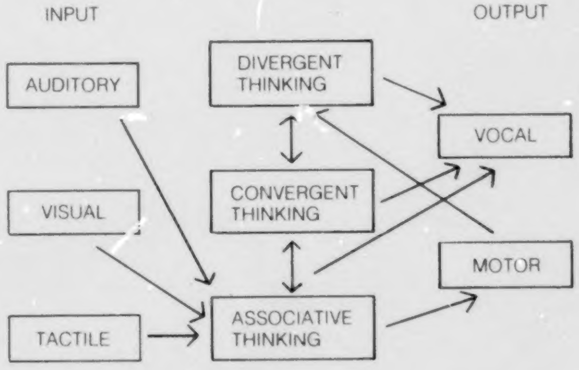
> "There is no conclusive evidence that supports any one etiology of Learning Disorders nor is there any agreement on standard procedures for diagnosis and treatment of children who do not learn according to expectations. Despite extensive investigation, knowledge in the field remains conflicting and confusing. The child who does not read at an early age and who does not behave upsets the adult world all around him. Once he identifies himself, every adult in his life has a go at him. PSYCHOLOGISTS tend to emphasize the influence of personality. NEUROLOGISTS stress the contributions of neurophysiology. EDUCATORS seek the magic methodology. SOCIOLOGISTS consider environmental effects of primary significance."

L'Abate and Curtis (1975) took pains to remind their readers that, while a search for causes may have a high priority for some specialists, it is an occupation of questionable import to educators.

> "Determing the causes of borderline deficits may become a futile, academic exercise and an indication of unresolved authority and power struggles among those who are interested in exceptionalities in children. Ultimately, regardless of the exceptionality's origin and nature, the special educator should work to cultivate the child's assets and to minimize his liabilities." (p. 63)

Plainly, terminological turmoil reigns at present. That means at least two things for regular class teachers: first, to avoid misunderstandings, it will be necessary to proceed with caution in talks with fellow teachers, parents and other professional persons. Second, there is ample opportunity for teachers, both individually and as organized groups, to shape what will be in the end, their responsibility.

Let us look at a simple model of some of the learning process:



Dunn P.L.D.K. American Guidance Service
Circle Pines, Minn.

Teachers present material to be learned so that the auditory, visual and/or tactile channels have input. Directions for tasks are given through these channels:

- Material is put on the chalkboard (VISUAL)
- Material is read aloud (AUDITORY)
- A task is demonstrated by having students touch or manipulate material (TACTILE)
- Directions are written at the top of a worksheet (VISUAL)
- Directions are tape recorded (AUDITORY)

Once the material and directions are presented they are processed by the student. This information is conceptualized by associative, convergent and/or divergent thinking.

— "I did that before" (ASSOCIATIVE)
— "Apples, oranges and plums are fruit and you can eat them" (CONVERGENT)
— "It looks like the other blue one" (ASSOCIATIVE)
— "All of these things go together" (CONVERGENT)
— "I know lots of ways you could use that" (DIVERGENT)

Because we cannot observe these processes within the students' mind we must depend on our observation of his output to see if the information has been processed correctly.

The student can give verbal information by telling or taping his learning. He can give us motor feedback by writing or demonstrating the requested task.

The learning disabled child may have problems in one or more of the channels of input. He may not be able to correctly process what he sees, hears, or touches. He may not be able to move from associative to convergent and/or divergent thinking. He may know the material but not be able to show this by describing it or writing it down. He may not even be able to demonstrate what he has learned.

This student is often labeled "lazy", "unmotivated" or "not really trying", because the teachers feel he is capable of doing the work and yet he cannot do it when requested. The student cannot explain his difficulty and frustration often results.

Reynolds and Birch (1977) have stated:

> "When a teacher teaches and the child does not learn, it is like a marksman who fires and does not hit the target. For a comparison from the helping professions, it is like a physician who carries out a treatment, but the patient does not improve. Certainly the teacher "taught", but like the others illustrated, the teaching "did not work"; it was ineffective.
>
> We think a satisfactory concept of learning disabilities should start from the position that the TEACHING of the children and youth should hold the center of the stage, not the CHARACTERISTICS of the children. We take the view that HOW THE CHILDREN ARE TAUGHT is the most important variable. And there seems to be less and less reason to think that test information about the neurological, psychiatric, intellectual, perceptual, information processing, and personality characteristics of the pupils can be useful in guiding teaching, except in the most-gross ways."

In 1969, McCarthy and McCarthy said:

> "To some, learning disabilities means children with a specific kind of impariment, while to others it is a generic term meaning all those children whose primary problem lies in their incapacity to utilize ordinary school procedures for learning." (p. xi)

They went on to say, "After all, almost all exceptional children could be described, by definition, as having some kind of learning disability" (p. xii).

How, then, might they be sorted out? Will the "true" learning disability please stand up? In broad terms, the following is how the terminology operates in practice.

True enough, deaf and crippled children may have disabilities that interfere to a greater or lesser extent with learning. So may speech handicapped or blind children. But typically they have not been spoken of as having learning disabilities; rather, they have been referred to as "handicapped". So they are not grouped in the "true" learning disability group.

Another large group of children has been called mentally retarded. Mental retardation has been for a great many educators another name for slow cognitive development plus premature stoppage of the progress of cognitive growth. Thus, it is not a great step to begin speaking of this condition as a general learning disability. It is thought to be characterized, as the term implies, by an all encompassing limitation, or disability, in learning.

There remain some children whose learning condition cannot properly be viewed as mental retardation. The limitation in learning is not general enough for that, nor is it traceable to something as overt as impairment of vision or hearing. In short, in some cases, there is nothing tangible to explain some children's poor scholastic achievement. So an assumption is made that their lack of educational attainment results from "a disoriented learning apparatus" (McCarthy & McCarthy, 1969, p. xii). These turn out to be the "true" learning disabilities, if the assumptions made along the way prove sound.

Having identified this group of children by a process of elimination, the next questions are: What do they look like? What do they have in common? Much energy has gone into trying to find physiological, psychological, sociological, and educational correlates to tie these children together with common threads. So far the results of those efforts have been, at best, discouraging. The "exclusion" definition leads to an agonizing over words rather than a search for variables that are useful for improving instruction. The residue of the progressive exclusion process is a motley group, heterogenous in practically all but one feature — they have school learning problems. And even those learning problems are dissimilar from one child to the next. In our view, their most significant common element is that somewhere along the line they have had less than fully effective instruction. Equally important, it appears possible to locate the instructional oversights and to provide individualized instruction that is corrective if attention is focussed on matching the pupil's cognitive state with the instructional material the teacher selects.

Regular class teachers will not easily adhere to the assumption that there are two kinds of measures — achievement and ability — even though that assumption is still often employed by specialists when they make discrepancy analyses.

However, what regular class teachers will recognize as relevant is the discrepancy between the child's actual achievement and the teacher's, pupil's, and parents' desired achievement goal. It is with the closing of that gap — step by step, with individualized content with teaching methods compatible with the child's own interests and style and rate of learning — that the teachers are understandably concerned. They want to be able to close the gap for any child who needs it, without worrying about administratively dictated restrictions in definitions of learning disabilities and behavior disorders, without fear of cutting across other established special education categories. (Reynolds and Birch (1977).)

Readings

Three readings conclude this chapter.

"Which Child, What Problem?" from the *British Columbia Teachers' Federation Resource Guide (1970)* gives an overall review of the general information available on learning disabilities. It was written for teachers and has examples and illustrations of many problems. Characteristics of behavior, perceptual and conceptual formation, motor functioning, scholastic achievement and adjustment and social behavior are noted. The reader is cautioned to observe carefully and be concerned if a number of the characteristics occur while the observation data is being collected.

William M. Cruickshank, a noted leader in the area of learning disabilities in his article "Myths And Realities In Learning Disabilities" for the *Journal of Learning Disabilities (1977)* has attempted to trace the research in the area and discuss the many problems among professionals in the area. He puts a large amount of information into perspective for teachers, parents and interested professionals.

William A. Hawke of the University of Toronto has looked at the methods of assessment in his article on "Learning Disabilities" for *Canada's Mental Health (1977)*. He discusses team assessment, intellectual and physical testing and the necessary follow-up procedures.

Which Child, What Problem?

B.C.T.F. Resource Guide, 1970.

(Which Child Suffers from a Learning Disability and What Characteristics are Associated with the Syndromes of Learning Disabilities in Children.)

Children entering school for the first time bring many things with them. Most arrive in the classroom with adequately developed physiological mechanisms, yet these children differ from one another on almost any criterion imaginable. Their intellectual capacities differ, their social development differs, their home experiences differ, and their emotional patterns differ. About the most that can be said for their commonality is that the majority begin their schooling on the same day.

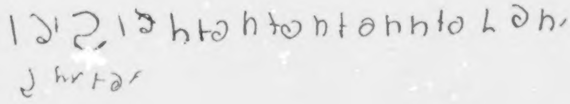
Most of these children are healthy, **but good health itself does not assure readiness for classroom tasks.** A child who has normal hearing and sight, but not adequate auditory or visual skills, is usually recognized by teachers because the child has difficulty in discriminating the likenesses and the differences among sounds and sights. For example, even the reassuring report of the school nurse that this youngster obtained normal audiometric and acuities scores does not eliminate the possibility of discrimination difficulties.

Perception is the ability to recognize stimuli through the reception of sensory impressions and to identify and interpret sense data by correlating them with past experience. This identification and interpretation of stimuli occurs in the brain and not in the sense organs (eyes, ears, etc.).

This child is first of all a child, and secondly a child with a disability. He has no loss in sensory function, although he does have reduced ability in effectively using sensory avenues of learning. He wants his efforts recognized. He wants acceptance as a person. His social needs are the same as those of any other child. His emotional needs deserve as much consideration. He has the same eagerness for successful learnings as has any child. **He wants desperately to live up to his abilities and not down to his disabilities.**

Usually, the child with a learning disability appears to be healthy and happy during his pre-school years. He has apparently developed normally and often displays above average intelligence. **Then he enters school.** Suddenly he is faced with a new environment. Learning to perceive written symbols becomes the most important task. Success is dependent upon one complicated and, for the present time, unattainable skill — the ability to perceive written symbols. **He is lost.** While other children are "learning their letters" and one by one are starting on the road to learning, he is mired on the road going nowhere.

Sample of Willy's language-printing.

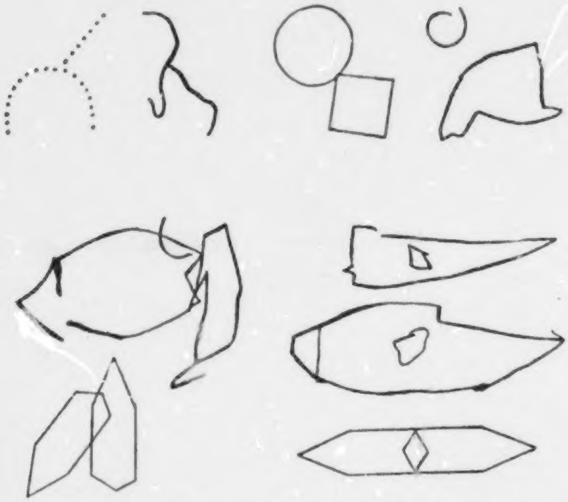


Teachers work with children in a classroom on an abstract, symbolic level. Words, lines of print, letters, etc., are all symbols and are all abstractions. The child's ability to cope with them depends heavily upon his success in earlier experiences with concrete perceptual situations. Usually such prior experience is largely unplanned and occurs in the home in a random fashion.

Readiness for learning, then, is much more than a loosely-organized group of skills. Rather, it consists of a hierarchical building of generalizations which allows the child to deal increasingly effectively with his environment. Learning disabilities may be viewed as difficulties in this developmental sequence. When these difficulties occur, there are gaps in the sequence which limit or distort all future learning.

Although the child's sensory organs (ears, eyes, etc.) are adequate, his brain may not be able to interpret correctly and use the data that his senses experience. With perfect eyesight, he may read the word **saw** as **was, b** becomes **d, p** becomes **q, left** may be written as **felt, on** as **no, sorrow** as **sowro,** and numbers may be similarly reversed, with **42** substituted for **24.** Up-and-down confusion leads him to write **m** for **w** and **b** for **p.** Most children about the age of six have similar difficulties, but for the child with learning disabilities, reversals are far more numerous and persist much longer. He may have difficulty in drawing shapes, and in writing or printing letters. His circles are flattened and his squares resemble starfish. In this distorted world, the child may be so aware of part of a picture that he cannot see the whole picture.

Bender Motor Gestalt Test Cards A, 5, 7 and 8. Drawing (copying of Bender) attempts by a 9 year old perceptually impaired child.



The perceptually impaired child is likely to have difficulty seeing a word or a complex form as a whole — his attention is attracted by details and he fails to see their relationship to the whole. He may also have trouble in differentiating a figure from its background — he has to work to identify the figure or word that he is supposed to see, as other children hunt for the hidden figures in a visual puzzle concealing figures in masses of foliage. Frequently he has difficulty in recognizing the same word or object when it appears in a different context, or in a different size or color. New, for instance, is the same word whether it appears alone on a flash card or as one of several hundred words on a printed page, it is the same whether it is printed in six-point type or in 3-inch letters, whether it is printed in black or yellow or red. But for the child with a learning disability, it may be recognized easily in one context, form or color, but appear totally strange in another. He lives, therefore, in an unreliable world in which is is constantly deceived by his senses as the symbols he is required to master elude him.

This child's auditory perception, also, may be imperfect and result in similar distortions. In spite of normal hearing, he is likely to have difficulty in distinguishing between close graduations of sound and he may scramble even the simplest messages. He may be able to pronounce the sounds of **d, o,** and **g** in **dog,** but when he blends them together, he may say **god, pog,** etc. If he is asked to write the sentence, "the little dog saw a rat," it is likely to come out "the litel god was a tar." Or he may not recall the sentence and fabricate an entirely different group of words.

Tues. Mar. 22 Bily
Itis spappatch Itis
spring
Wecangoforara
ride
inthe country.
Wecantakeour
lunch.
Lookatthesprin
g flowers

Interpretation of Billy's Language Story:
"Tues. Mar. 22 Billy
It is spap patch it is spring
We can go for a ride in the country.
We can take our lunch
Look at the spring flowers"

There is often a direct relationship between perceptual disorders and the syndrome of physical restlessness and distractibility. The child is exposed to a perpetual and indiscriminate bombardment of all kinds of stimuli because of his inability to filter out certain stimuli and thus perceive a focus of attention. To his situation the child reacts in an apparently purposeless fashion. His behavior is referred to as hyperactivity, and is marked by short attention span and uncontrolled impulses.

Impaired perception deprives the child, to the degree of his disability, of the proper means of intellectual development. It also impairs the establishment of close relationships with children and adults with whom he associates.

Defense mechanisms and disturbed behavior frequently are outcomes of insecurity and anxiety. These develop when the child perceives incompletely and faultily and when the child cannot successfully master his world. To this child, the world appears as a disorganized and disintegrated environment, to which he responds with disturbed thinking and with disorganized and disoriented behavior.

No firm figures exist on the number of children in Canada with serious learning disabilities. However, most authorities agree that from 10% to 15% of all school-aged children are significantly handicapped by specific learning disabilities. These conditions are at their worst during the earlier stages of childhood and are more common in boys than in girls. These disabilities particularly concern teachers of children aged 6 to 12 and may become less severe during the early teens. For example, some children with severe reading and spelling disabilities at the ages of 6 to 9 years, learn to read and spell at an average standard by the time they reach 15 years of age. However, others may remain severely disabled all their lives, without attaining standards of reading and writing commensurate with their intelligence.

The term "learning disabilities" applies to children of near-average to above-average general intelligence (not IQ) and with mild to severe learning and/or behavioral abnormalities. These abnormalities are associated with subtle deviant functioning of the central nervous system. These children display a significant discrepancy between their estimated intellectual potential and their actual level of academic performance. This discrepancy is related to basic disorders in the learning process. It is NOT related to generalized mental retardation, educational or cultural deprivation, severe emotional disturbance, sensory loss, motivational problems, or physical disabilities, although these factors can seriously complicate or cause delays in the learning process.

Teachers, because of the extent and variety of their responsibilities, are willing to learn about and to apply new approaches to the identification and treatment of children with learning difficulties.

They must, however, guard against accepting any single method that will "solve their problems." No specific and universally applicable method of evaluation or treatment can be regarded as optimal for all children or for even a single diagnostic category. For example, some children with learning disabilities are hyperactive, while others move exceedingly slowly; some are aggressive and daring, while others are very fearful and withdrawn; some show difficulty in disregarding irrelevant stimuli and work best behind a screen, while others are threatened by isolation and respond better to the presence of a teacher and to the stimulation of a group; some have impaired intellectual functioning in specific areas, while others are retarded on a general basis; and some will become leaders in society and work as physicians, teachers or scientists, while others will require the protection of a sheltered life.

The teacher may observe the following characteristics in her pupils. When a characteristic occurs in isolation, it may not be significant. When, however, a number are discerned in one pupil, they constitute strong evidence of a learning disability and may serve as excellent guidelines to assist the teacher in identification.

A. Characteristics of Behavior

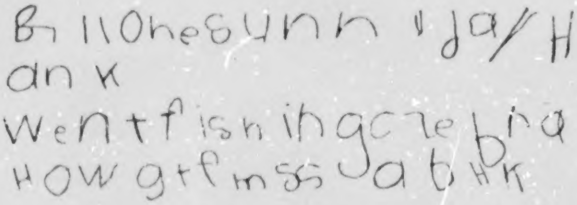
1. Marked distractibility with erratic, uninhibited, restless and impulsive behavior.
2. Undue sweetness of disposition, even-tempered, co-operative and friendly.
3. Activity shifts from one pattern to another within short periods of time; very short attention span for age and impaired power of concentration.
4. Inability to complete a simple activity — inability to organize behavior into a total pattern — frequently losing the thread of what others are saying before the completion of the first sentence.
5. Repetition (perseveration) of specific patterns of behavior (motor and verbal) even though these are unacceptable and the child is punished for them.
6. Wide swings in mood — may move from euphoria to depression.
7. Frustrations — when pressured beyond his tolerance level the child becomes overwhelmed, may burst into tears or become angry and withdraw from further attempts.
8. Anxiety — uncertain and frightened in new situations or those that require rapid change.
9. Impaired ability to make decisions, particularly from many choices.
10. Gullibility — easily led by peers and older children.
11. Over-reaction to emotional stimuli.
12. Destruction of materials, supplies and toys.
13. Fascination with aggression and/or excitement.
14. Insensitivity or excessive sensitivity to pain.
15. Established reputation as a "discipline problem" between the ages of 6 to 9 years.

Not all children suffering from learning disabilities are **primarily** emotionally disturbed. Their basic developmental lag in physiological-psychological functioning, however, makes them especially susceptible to adverse educational experiences, resulting in strong **secondary** emotional difficulties.

B. Characteristics of Perceptual and Conceptual Formation

1. Marked distractibility with a tendency to shift from one idea to another and to give irrelevant answers.
2. Inability to classify or synthesize information into concepts.
3. Perseveration — may perceive a "grouping" and then base all further groupings on this precept or may be unable to fuse sensory impressions into meaningful entities.

4. Poor memory — both immediate recall and long term.
5. Disorganized thinking.
6. Thinking generally stronger when involving concrete objects or situations; very poor capacity for abstract reasoning.
7. Perceptual reversals in writing and reading letters and numbers.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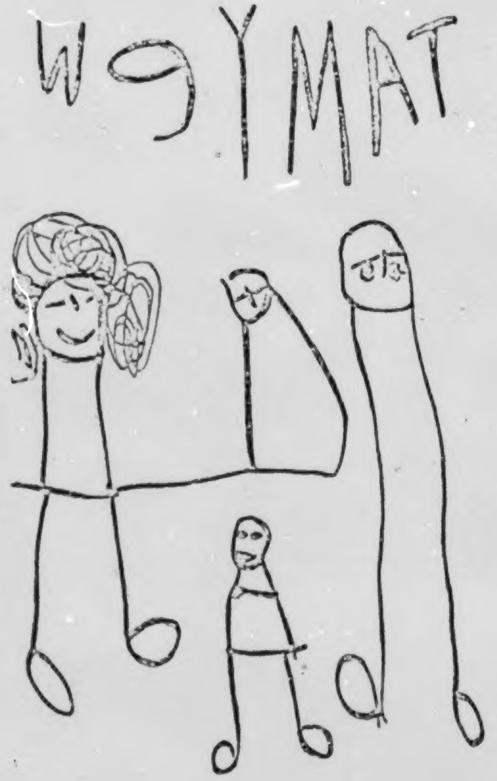
8. Marked sensitivity to all stimuli (light, movement, sound, etc.).
9. Impairment of:
   - (a) orientation in time
   - (b) spatial orientation
   - (c) judgment of distance
   - (d) discrimination of figure-ground (auditory and visual)
   - (e) discrimination of part-whole-focus on small segments — neglecting the whole
   - (f) discrimination of size
   - (g) discrimination of left-right and up-down
   - (h) discrimination of tactile and auditory stimuli
   - (i) concept of body image.

Self and family portrait of 8 year old perceptually impaired girl.



C. Characteristics of Motor Functiong

1. Hyperactivity or hypoactivity.
2. Limited, fine and/or gross visual-motor co-ordination.
3. Clumsiness or awkwardness.
4. Rigid or tremulous movements of hands.
5. Poorly patterned gait.
6. Fatigues easily.
7. High frequency of enuresis (bed wetting).
8. Lags in reaching developmental milestones in motor, language, etc.
9. Frequent mild speech irregularities — immature speech.
10. Physical immaturity (however, physical development may be normal or advanced for age).
11. Indirectly related characteristics — family history of left-handedness or ambidexterity or of learning difficulties.

D. Characteristics of Scholastic Achievement and Adjustment

1. Reading disabilities.
   - (a) Reading may be low, in rating or in function and frequently is blocked at the level of illiteracy or near-literacy.
   - (b) Reading and spelling progress may be delayed by difficulties in recognition, matching, sense of direction, etc. Even with these mastered and words or letters recognized, the following difficulties may remain:
     - (i) single words are frequently read backwards.
     - (ii) in sentence reading, words are picked out at random (even if all are equally well known) instead of being read in rows from left to right.
     - (iii) letters are muddled in a word when spelling or writing from memory.
     - (iv) abstract thoughts are not grasped, inability to keep more than one fact in his mind at a time so that the content of stories read by his age mates may be far beyond his comprehension.
     - (v) inability to recall a single, relevant fact or to repeat in his own words a story which he may have read with great fluency.

"SHARE AND TELL"

Story as dictated by student and recorded by teacher.

"Last night when I woke up, I got dressed and had some dinner — then after when we came from school we sat down."

"Last night — my Mum, when we were having our lunch and my Mother was late for school and then the bell went and I was on the school. I put the lunch bucket on the office and I got it from the shelf."

- (vi) difficulty in auditory perception, i.e., in differentiating sounds of letters such as **m** and **n.**
- (vii) confusions in the association of phonics and structural word parts; substitutions, reversals, omissions and additions of words and word parts; inadequate use of context as a cue to word recognition and analysis.

and difficulty identifying and producing the required letter forms.

(viii) oral reading of the simplest material is tedious, punctuated by strain, hesitation, and mispronunciation and requires constant teacher aid.

2. Arithmetic disabilities.

  (a) Inability to arrange objects in a row or even in groups for counting and calculating.
  (b) When counting objects (whether large or small, concrete or illustrated) there is little co-ordination between hand movement and counting (e.g., one object is moved and the child says "2, 3, 4").
  (c) Difficulty in writing problems or in deciding where an answer should be written.
  (d) Inability to calculate mentally.
  (e) Unable to remember sequences — such as the days of the week.

2. Printing, writing, cutting, drawing disabilities.

  (a) Excessive scribbling.
  (b) Need for special help to produce symbols.
  (c) Inability to trace a line.
  (d) Inability to copy a shape, even when able to recognize or match shapes and pictures.

4. Comprehends instructions; succeeds with verbal tasks but fails with written tasks.

5. Marked variations in performance from day to day and from hour to hour.

6. Little ability to organize work.

7. Slow in finishing work, which if done, is usually sloppy or appears to be carelessly executed.

8. Poor performance on group tests (intelligence and achievement) and classroom examinations requiring reading and writing skills.

9. Achievement low in some areas — high in others.

10. **Significant difference** between the measurements of learning by verbal expression and by written expression. Generally there is an inability to link sounds and symbols. Frequently the child has a good grasp of oral language and speaks fluently. However, his vocabulary may be limited and he may confuse words or parts of words he uses.

11. Inability to generalize — to comprehend principles.

12. Maintains a highly individualized learning and work pattern.

E. Characteristics of Social Behavior

1. Boldness and social-aggressiveness.
2. Poor judgment in social and interpersonal relations.
3. Excessive excitement in normal play with a group of children — maintains a better adjustment when playmates are limited to one or two.
4. Poor peer group relationships.

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Myths and Realities in Learning Disabilities*

William M. Cruickshank, PhD

The concept of learning disabilities in childhood and youth is based on a confusion of ideas and understandings, and for the newcomer to the problem, it is often difficult to identify myths and unfounded concepts from the realities. The author has attempted to identify a number of misconceptions and to counterbalance these with statements based on historical research, or theoretical facts. He deals with such matters as the issue of definition of the field, focus of child population included in the concept of learning disability, personnel preparation, and integration of these children into regular grades.

The issue of learning disabilities in childhood and youth is one of the more interesting phenomena that have occurred in education. Its history has been well documented on more than one occasion so that no further reference will be made to it here (Hallahan & Cruickshank 1973, Wiederholt 1974). The field is fraught with misconceptions. It is ill-defined in the minds of most educators and psychologists; certainly it is not understood by physicians, who have only recently become interested in the problem. Its implications are neither understood nor adequately conceptualized by the majority of school administrators. The hopes of parents are not being realized because of these facts. It is essential that serious thought be given to this matter and that more appropriate directions be initiated.

A recent volume indicates that the field of learning disabilities emerged coincident to the development by Kirk of the Illinois Test of Psycholinguistic Abilities (Haring 1974). This is the first myth which should be considered. Kirk's work, uniquely important, nonetheless had antecedents which he recognizes. The ITPA itself is based on the earlier conceptual framework of Osgood, but the additional and perhaps still earlier stimulus for whatever Kirk did in the ITPA came, he says, from personal contact with Ruth Monroe in Chicago and later from Strauss, particularly when he and Kirk were both working in Wisconsin. A still earlier stimulation of Kirk's direction undoubtedly came from his direct association with, and exposure to, both Strauss and Werner in Michigan. There is no effort here to minimize the work of Kirk. The fact of the matter is that he and several others in various institutional and university settings were working simultaneously along somewhat similar lines. With the exception of Monroe and Grace Fernald, to whom Kirk also gives credit for the stimulation of his thinking, most of these investigators were, directly or indirectly, his colleagues at an institutional setting in Michigan: Newell Kephart, Sidney Bijou, Bluma Weiner, William Cruickshank, Ruth Melcher Patterson, Charlotte Phileo, and others who followed.

The reality of this situation is that Kirk was one among several who moved to understand the complexities of children who were *later* to be called learning disabled. Kirk took the route of Osgood and the ITPA; Kephart, the conceptualization of perceptual-motor matching and training; this writer, the concept of the psychoeducational match and structure. Bijou branched off into behavior modification, others into other areas of child growth and development.

But then there are others who have made significant contributions to the field presently known as learning disability, and these were not related to the original Michigan group. Their thinking added much to the understanding of this problem, and is represented by the work and writing of Marianne Frostig, Belle Dubnoff, Sheldon Rappaport, and others whose orientation comes essentially from concepts of ego psychology and introspective clinical orientations. There were still others. All of the initial contributions of these individuals antedated the publication of the ITPA and the term *learning disabilities.* No single person is responsible for this field. The thinking and conceptualization of the individuals to whom reference has here been made are, however, astonishingly similar. There are few points of disagreement among them. There is a difference, from time to time, in the vocabulary employed; but, if careful analysis is made regarding the meanings of words used, it will be observed that underlying concepts are basically similar.

A New Field

During the 1974 annual conference of the Association for Children with Learning Disabilities, I chanced to hear a speaker state, "The field of learning disabilities is an old one, one with a long history and many precedents." Let us consider Myth No. 2. The field of learning disabilities is perhaps the most recent development of any aspect of exceptionality in childhood. It has few precedents. It possesses an inadequate research base. It is characterized by an inadequate professional corps in colleges and universities and, therefore, by an inadequate supply of appropriately prepared teachers to serve the complex needs of these children.

What is the reality of this field? Wiederholt (1974) has traced the beginnings of this field of interest to Gall as early as 1808, but with discrimination, he points out that the phenomenon of learning disability per se is a contemporary issue. The Michigan group, to which earlier reference was made, had its origin and did its greatest work, however inadequate from present day research standards, in the late 1930s and 1940s. The first extension of this original work (which was done on high grade, mentally handicapped boys) was initiated and completed in 1948-53 with a population of intellectually normal, cerebral-palsied children. The first investigation into structured educational programming for these children started in 1957 and was reported in 1961 (Cruickshank, Bentzen, Ratzeberg, & Tannhauser 1961). Kephart's initial publication appeared in 1960 (Kephart 1960). The first publication dealing with the competencies needed by teachers of these children appeared in 1966 (Cruickshank 1966) and the first report of a coordinated program of teacher education in 1969. The ITPA first appeared in 1968. With the exception of Gall, every person and date mentioned in these few paragraphs falls within the life span of the conference speaker referred to above, and is contemporary with him.

This is a new field insofar as its *formalization* is concerned. As a credit to Kirk, he certainly tried to give impetus to its noncategorical implications, an effort which others at the same time, and earlier, had also attempted. It has become categorized as an aspect of child deviance in ways that most of us hoped never would happen and, in effect, have worked hard to prevent. However, it is easier to speak in terms of groups than it is to speak in terms of concepts. It is easier to classify than it is to attempt to meet the peculiar needs of individual children with learning and teaching materials and techniques germane to the problems directly at hand. It is easier to conceptualize groups than it is to envision the variety of developmental needs of children within a group, and to address each appropriately.

The newness of the field in part accounts for the ill-prepared professional and teaching corps which are to be encountered at every turn in professional education. The conference speaker to whom I have referred simply did not know his facts, but his position is frequently shared by school officials who are likewise uninformed. This produces frustration in teachers and disappointment in parents as they see children continuing to flounder without adequate understanding or appropriate educational efforts on the part of school service personnel.

What is Learning Disability?

What is learning disability? There are those who would view this term as a synonym to "remedial reading," or to educational remediation in general. This is completely fallacious. Remedial reading teachers, consultants, or specialists, by these or any other names, are not overnight appropriately converted into specialists capable of working with the problems of the learning disabled. This is Myth No. 3 to which I wish to address myself.

It is important to trace the concept of learning disability back to its neurological origin. Learning disability, specifically defined, is a **manifestation of a perceptual processing deficit.** It is important to differentiate between the concept of sensory perception leading to normal vision or hearing and processing of a perceptual nature, which not only involves the appropriate recognition of form or sound, but also includes the attachment of learned meaning, or appropriate motor responses, to whatever stimulus is received. This is the essence of the ITPA; it is likewise the basis of the concept of task analysis which Junkala (1972, 1973) discusses in terms of input and output concepts. However, there are numerous means other than the ITPA, equally effective, to qualitatively assess the capacity of the child to process that which he perceives. Regardless of the tools used, it is an absolute in considering the concept of the psychoeducational match that such evaluation and assessment be done, in order that teaching materials and the learning environment can be matched with the specific processing needs of the child under consideration. If the child's disability involves perception or perceptual processing, it logically follows that one is dealing with a neurological dysfunction of some sort. Thus learning disability would, from a practitioner's point of view, be conceptualized more accurately as a *perceptual processing deficit* resulting in a specific learning problem of some sort, involving one or another or all of the sensory modalities. Definitions of learning disabilities which ignore the concepts of either perceptual processing or the neurological base are misleading. Such is not to state that the specific neurological dysfunction can always be identified. From the psychoeducational point of view, the specificity of the neurological deficit (if it could be determined) would be helpful, but it is not a requisite to good programming.

A Developmental Problem

While those concerned with remedial reading, or other forms of remediation, frequently may need to employ techniques utilized with children who have perceptual processing deficits, remediation is in no way the solution for all the problems of the so-called learning disabled. One must differentiate between problems of learning and perceptual processing deficits resulting in specific learning disabilities. In the former — i.e., problems of learning due to initial poor teaching, problems of mother-child separation in early childhood, or other similar types of problems, remediation undoubtedly has a significant role. **One does not, however, remediate a vacuum**, and this is essentially the case in the child with perceptual processing deficits. In this child, appropriate learning has not taken place because of neuroperceptual processing problems. A technique of education has to be developed which will provide the child with the necessary initial skills, regardless of chronological age, and which will give him a sound base for the acquisition of more complex learnings later. This is not remediation, **it is new learning.**

What is an adequate definition of this problem? In 1975, there appeared an appropriate and a logical definition (Hobbs 1975) which merits thorough consideration and adoption. It is a thoughtfully prepared document, the result of the combined thinking of several people with long experience in this field, plus the critique of a much larger field of experts who know the problem well. It is a definition stated in appropriate perceptual terms. The authors define the problem in terms of its "psycho-educational reality." It is stated that this problem refers

> . . . to those children of any age who demonstrate a substantial deficiency in a particular aspect of academic achievement because of perceptual or perceptual-motor handicaps, regardless of etiology or other contributing factors. The term *perceptual* as is used here relates to those mental (neurological) processes through which the child acquired his basic alphabets of sounds and forms. The term *perceptual handicap* refers to inadequate ability in such areas as the following: recognizing fine differences between auditory and visual discriminating features underlying the sounds used in speech and the orthographic forms used in reading; retaining and recalling those discriminated sounds and forms sequentially, both in short- and long-term memory; ordering the sounds and forms sequentially, both in sensory and motor acts . . . ; distinguishing figure-ground relationships . . . ; recognizing spatial and temporal orientations; obtaining closure . . . ; integrating intersensory information . . . ; relating what is perceived to specific motor functions. [p.306]

The definition ends here, but to this could be added such things as an inadequate ability to conceptualize parts into meaningful wholes; the sometime presence of perseveration; the inability to refrain from reacting to unessential environmental stimuli; and the resulting immature or faulty self-concept or body image. Actually contained within this definition is a total program of teacher preparation as well as a total concept of service to children with such problems in the public schools of the nation.

It is immediately obvious that one is dealing with a complex developmental problem, not a problem of remediation. It is also obvious that students in colleges and universities are not being given the appropriate preservice experiences to meet the challenges of this definition nor of the children who present these characteristics.

LD and IQ

A continued reading of the definition provides a further concern and Myth No. 4. The committee which prepared this definition, of which this writer was a member, does not go far enough, although there is an important allusion to the relationship of intelligence to processing deficit resulting in learning disability as we are defining the problem. **The reality of the situation is that learning disability is a matter relating to children of any intellectual level.**

Numerous definitions of this problem define learning disabilities by exclusion, i.e., what it is not. It is stated that this is not a problem of primary mental retardation or sensory defect. I would agree. The crucial word is *primary*. This, however, is often overlooked by the nondiscriminating professional person. Indeed, many definitions of learning disability to be found in state and local regulations speak of children with learning disabilities as having IQs above 80. The implication is that the problem is a different one below the 80 level. This is an arbitrary statement, absolutely without a basis in fact. There are reports by parents of mentally retarded children that they have not been welcomed to membership in the local association of parents of learning disabled children. The reality of this myth is that learning disability is a respecter of no intellectual level. Perceptual processing deficits are to be found in children of every intellectual level and are respecters of no given intelligence range.

As a matter of fact and history, practically everything which is known about the nature of perceptual processing deficits was discovered initially from studies completed with exogenous mentally retarded children of educable levels. Certainly this was the orientation of the basic initial studies which were undertaken by Werner, Strauss, and their associates. Recently the author was informed by a representative of a state department of education that the problem could be defined by the state in any manner desired. This may be technically correct, but it is professionally irresponsible. It indicates a lack of knowledge or appreciation of what the problem actually is.

The adherence to a concept of IQ 80, itself an illogical, arbitrary cutoff point, serves to deprive thousands of mentally handicapped children of appropriate understanding and programming and, indeed, in many instances it results in the worst type of discrimination. One does not have to travel far in any direction to find **classes for the mentally retarded being essentially black and classes for children with learning disabilities essentially white.** The IQ concept does not have an appropriate relationship to this problem, although it may take class action suits to bring the matter into reality for many state and local educators. Under the present myth, thousands of retarded children with perceptual processing deficits resulting in learning disabilities are being misclassified and are, in effect, being denied an educational birthright.

How many need help?

One does not have to look far to find Myth No. 5. This has to do with incidence and prevalence. From time to time it is stated that the problem of severe learning disability accounts for 1% of the elementary school population.

From still another source it is stated that learning disability is a matter of 12% of the same population. More frequently, in lay groups, the figure of 20% is used. An outstanding elementary school principal stated to this writer that 83% of her center-city elementary school pupils functioned as if they were perceptually handicapped. Somewhere between these extremes lies the truth.

The reality of the situation is that we do not know how many such children there are in the schools of this nation. There are absolutely no adequate data of either an epidemiological or demographic nature to provide a base for adequate programming. At the present time, there is an interdisciplinary group of scientists at the University of Michigan working to put together a valid epidemiological study of this problem, and they hope to be able to study the issue in sufficient breadth to present demographic data as well. These data, however, are still a matter of the future. At the present time, adequate data do not exist, and this results in the horrendous guesses to which I have just referred. The absence of data constitutes the basis for confusion in state and federal legislative houses and, as well, means that local school administrators must respond to parental and community pressures with inadequate information. The collection of this information is an absolute requisite for national planning of all types.

In what I have thus far said, it appears that there is a reason for the crazy-quilt manner in which this field has developed. Originally I pointed out that the underlying processing deficits and an obvious matching of them with teaching materials and environment could provide an outstanding clinical teaching program for the children who needed it. We, at Syracuse University in the 1950s and 1960s, learned that what the investigators of a decade earlier had discovered regarding the learning problems of exogenous mentally retarded children also applied in full force to cerebral palsied children of all intellectual levels. Others of my students and colleagues learned that this was also the case with deaf children whose deafness was of an organic nature; with aphasic children, an observation of Mildred McGinnis of long standing; of some epileptic children, of some blind children, and of many, if not almost all, of the so-called hyperactive, emotionally disturbed children. This last group has been studied more carefully by Haring, a student of mine, and by Phillips. The essence of the matter, however, is one of clinical diagnosis of a penetrating nature. The medical, psychological, or educational category or terminology is meaningless and completely unnecessary. What is essential is the penetrating evaluation of the child in terms of the psychological processing problems mentioned earlier that are inherent in the definition. As these are identified, they must be matched by equally as carefully considered learning and teaching techniques so that new learning will result, and the child will be started appropriately along his developmental route. **Although Kirk, and many before and after him, urged that a new category of special education not be created, that very thing has happened. Once again we see children being assigned to classes rather than educators being concerned for the child's uniqueness and educated in such terms.**

Education's Role

Myth No. 6 lies in the nature of the professional relationships to the problem of perceptual processing in children leading to specific learning disabilities. This is basically a psychoeducational problem, not a medical problem. It is only recently that pediatricians, for example, have become actively aware of this problem of childhood. Nowhere in the preparation of the physician is there provided training which would permit his discipline to assume major direction of the life management plan for these children. True, medicine has a place in the interdisciplinary attack on the problems of these children. I reiterate once again, however, that the **long-term issue** is not one of medicine, be it pediatrics or neurology, but **is of education.** This writer takes no issue with the medical professional, except when that profession enters into arenas for which it is not prepared or is ill-prepared. There are a few medical personnel who are performing outstanding services for these children, but they are doing so generally in conjunction with educators and psychologists who are skilled and experienced with the problem.

I hasten to point out that in instances of research, it is important to have neurological colleagues join the interdisciplinary research team. Neurology is first to state that it does not have all of the refined skills needed to isolate the neurophysiological problem basic to processing deficits. However, the skills of this discipline can go far to refine the diagnostic effort, and this will result in a somewhat more homogeneous population for study. Here, however, I am discussing the learning situation. In this arena, the educator is and must be predominant. Learning disabilities are not a medical problem; this is the problem of numerous disciplines bringing their skills and expertise to the educator, who in the long run must be the implementer. Experience over many years has demonstrated the wisdom and validity of this approach.

To medicate or not to medicate?

Myth No. 7 deals with the efficacy of medications in the management of children with specific learning disabilities. There is an appalling lack of adequate research pertaining to the utilization of medications for the control of behavior in elementary school children, other than minimal research stated as having been done by commercial drug companies. This, in my mind and in the minds of others, is not sufficient to warrant the widespread utilization of medications with these children by physicians. There is evidence to the effect that in some classes of children with learning disabilities, medication is a part of the daily intake of 40% of the children. In at least one institution known to this writer, 90% of the total population was on some sort of medication.

The reality of the situation is that if there is an adequately structured educational program with adequate matching of teaching materials to the problem and with built-in success experiences for the child, medication will often not be required at all. Medications are poor substitutes for good educational programs, are often a resort which parents must seek when good programming is unavailable and when teachers are ill-prepared to deal with the unique features of the child with specific learning disabilities.

Ill-prepared Teachers

There is a myth which is no myth at all to parents whose children are being served by ill-prepared teachers. Myth No. 8 deals with the reality of the instant specialist in colleges, universities, and public schools who present an aura of quality, but in reality has only the veneer of the specialist. The newness of the field accounts for the lack of a well-prepared corps of university professors in this field. As such, it differs from some of the other areas of special education — mental retardation, for example. That field had been visible since about 1918, when Charles Scott Berry started summer teacher education courses at what is now Eastern Michigan University. In the interval between then and the late 1940s when the parent groups began to organize, quite a large number of persons experienced with mentally retarded children began to write, and later to teach, in colleges and universities. A body of knowledge, although limited, was available. Professors with an orientation both to retardation and teacher preparation were available in small numbers, but sufficient to prepare others adequately when the 1963 so-called Kennedy legislation became a fact. The field of specific learning disability was not a reality until after 1963. Before that, it was a matter of exploration, theory, and clinical research done by a very small number of persons. There was no precedent of teacher education in this field, except for small programs at the University of Illinois and at Syracuse University, whose program began about 1963 with the support of the National Institute of Mental Health.

When the parent group was organized in 1963, there was a general assumption that all was known that needed to be known in order to provide quality programs and that sufficient dollars would provide the treatment services their children needed. Indeed, less was known than was needed to be known about the problem — a situation which continues today in large measure. There was no formalized teacher education programs, nor were there college faculty members with experience to staff them. In contrast to the response which universities were able to make to the Kennedy legislation (which resulted in a splendid new group of university faculty members in the field of retardation), practically no personnel were avilable in the field of learning disabilities to be able to turn out young faculty members for teacher education institutions. The few who were available often resorted to the mechanism of summer seminars, which were a far cry from what was needed. There has never been a national policy espoused by the US Office of Education or by state departments of education focused on the production of a qualified corps of university professors in this area of child development.

As a result, in this area there is what Kirk long ago called a "cafeteria" approach to teacher education. A little of this and a little of that does not produce good professors or good teachers. Although university faculties in a certain state were given more than two years of notice to submit programs of teacher education in this area, most universities did nothing about the matter until a few weeks or months before the deadline. As the deadline neared, there were frantic efforts on the part of faculties in special education in the universities and colleges to put together programs. These consisted essentially of utilizing old course titles, since time no longer permitted the development of new courses appropriate to the problem. To these old titles were appended new course descriptions. Since few, if any, of the universities possessed faculty members expert in this field, the nature of the conglomerates that were developed was a far cry from what in reality was needed. To my knowledge, every one of the patchwork programs was approved by the board of higher education in that state, and teachers today are being prepared through them. The response of the mature students in terms of critique is sad to hear. They realize that what they are being given is not appropriate to the need which they face in the classrooms of the public school systems.

Where did the professors come from to staff these several programs? In one instance, a good professor of the education of the emotionally disturbed overnight became the faculty leader in the area of learning disabilities. In another instance, a faculty member in the field of school psychology became the more-or-less self-appointed expert in the field of learning disabilities. In other instances, similarly sad situations prevail. A parent-turned-educator heads the program in one of the facilities. This is no way to guarantee a solid teacher group in the state under consideration. But this state is not unique. Until the national leadership provides a program for the preparation of college professors, and until the program which they experience is one of depth, as has been described and suggested elsewhere, there can be no quality in this field. In my considered opinion, the situation is one of the worst in the total field of professional education. The myth that colleges and universities can presently produce a solid teacher group is being negatively demonstrated on almost every side throughout the nation.

The Problem of Mainstreaming

The final myth I wish to highlight here, Myth No. 9, pertains to the current unfounded belief that children with specific learning disabilities can, and ought to be, educated in the regular grades of the community. Parents supported this position for many years because they were disturbed with what they oftentimes saw their children receiving in the special classes. General educators, teachers, and administrators for years declared that the better place for handicapped children was in the regular grades. Often there was almost an inquisitional program launched by general educators against special educators, and at best, special educators frequently were granted what amounted to second-class citizenship in the public school system. Special education was placed, and often still is, within the administration of departments of pupil personnel. Special educators did not need more personnel approaches; they needed instructional assistance, something their supervisors were unqualified to give and general instructional personnel did not provide because of their own lack of background with atypical children. Against this poor situation, parents saw integration, mainstreaming if you must, as a way out. The general educators supported this, and some of the special education leadership also advocated it on the basis of a few case studies, not on the basis of any adequate research. Today we see a backlash developing. We had better be prepared to meet that backlash with some powerful educational tools.

Children with perceptual processing deficits resulting in specific learning disabilities have needs which the general elementary or secondary educator cannot meet in the normal classroom setting. Probably some integration for short periods each day might be valuable, but until genuine success experiences are integrated into the child's self-perception, either through the medium of well-prepared teachers working in resource rooms or in special clinical teaching stations, the capacity of the child with anything short of a very mild learning disability is going to be less than that needed to function in a normal or ordinary classroom situation. Unless general elementary educators understand the nature and needs of the problems of processing deficits and know how to adapt the learning situation and teaching materials to the child's needs, the potential for continued failure on the part of the child is present. It is unlikely that preparation of elementary general educators will include this emphasis in the foreseeable future. In the meantime, what of the children who are physically, but neither educationally or psychologically, integrated?

Educational Catastrophe

In my considered opinion, the status of learning disabilities in the public schools of this nation is one of educational catastrophe. We have too many instant specialists in positions of leadership, positions which, because of their lack of preparation or knowledge, they must defend with the pretense of expertise. This can be rectified if a hard line is assumed. There is sufficient knowledge available to put together overnight a splendid program of university professor preparation. Within two years, a corps of well qualified professors could be ready which, with some national support to universities, could result in the beginning of a steady stream of qualified teachers being released to function in the public schools. We do not have all the research needed in this area, as I have stated, but we have enough to turn around the field of education for children with specific learning disabilities from a position of chaos to one of logic and satisfaction to the professional educator and parent-consumer alike. It will take intestinal fortitude to do this, but unless strong stands are immediately taken, the chaotic situation throughout the country, as evidenced in the mediocre local school programs, will continue unabated. — *Institute for the Study of Mental Retardation and Related Disabilities, University of Michigan, 130 S. First St., Ann Arbor, Mich. 48103*

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Learning Disabilities: a critical look at methods of assessment and remediation

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I have been interested for many years in learning disabilities, and at one time felt I knew what they were and what should be done for them. Recently, I have found myself more and more uncertain about them.

Nothing being said here should be construed as meaning current programs should be dropped. However, many areas of these programs should be looked at critically in order to be certain that what is being done is effective in terms of the time of highly skilled personnel, and of money being spent.

Problems of Assessment

There are many areas in assessment that could be looked at, but of these a few have been selected that it is felt are particularly important. For instance, how extensive and detailed should the investigation be? In many cases one has an assessment team consisting of a pediatrician, a psychologist, a speech pathologist, an occupational therapist and a social worker plus additional consultants. This assessment is expensive both in time and money. It obtains a tremendous amount of information which is often difficult to present in an organized manner. It is also difficult to organize these findings into a meaningful assessment and to relate them to an effective program of remediation. One wonders how much more information is obtained by this type of investigation than that obtained from a smaller group. At the Hospital for Sick Children we have two clinics, one a maxi clinic involved in research and one a mini clinic involved in routine assessment. The maxi clinic has a large staff, the mini clinic three individuals, a pediatrician, a psychologist and a speech pathologist. It is our impression that we do not obtain a great deal more information from the intensive investigation and in fact rarely feel that we need more information than is obtained by the mini clinic before planning adequate programs. I feel that we may be over assessing our children, often obtaining more information than we need for diagnosis and more information than we can use in remediation.

The second area is the validity of the tests. Staff often fail to question the validity of their tests — accepting them as "gospel". They do not attempt to decide whether the results are due to actual effects in the individual or are test artifacts due to anxiety, tension, or poor motivation. This is particularly evident in assessing memory, either auditory or visual. One often finds significant differences in repeated tests, even though there have been no remedial measures in the interval. Often the only explanation for these differences is the differing attitudes of the child to the tests. I have noted this in my own practice in children who come to me from a long distance. Many of these children seem initially overwhelmed. In the tests they tend to block and often the results suggest a reduced level of function. However, if they are reassessed in six to eight weeks, one often sees a completely different attitude on the part of the child and completely different results on the test. On the Binet, for example, children have moved up 15 to 20 points.

The third area is how does one correlate different tests which purport to evaluate the same function, for example, auditory memory, visual perception? One must recognize that the tests are different, that thw WISC test for auditory memory and the ITPA test for auditory memory are not identical. The Ayers, the Frostig, and Beery tests of visual perception are also not identical. However, I think we should determine what they actually do assess and how one can correlate and explain differences in the individual tests.

What do "soft" neurological signs mean? What do a variable esotropia, tremulous movements of the outstretched hands, hypotonia, reduced reflexes, or equivocal plantars mean? Sometimes they are associated with organic cerebral disease but often this is not true. The children show no abnormalities later on, and the signs vanish with maturation. I suspect, and I think this is the correct term, that these signs may well represent a relative or a functional immaturity of the nervous system.

A similar question exists with the electroencephalogram. What does the mildly abnormal EEG mean? What does the poorly organized EEG — the EEG with an increased amount of slow waves — or the EEG with an increased synchrony on hyperventilation mean? I think that, like the soft signs, these often mean relative immaturity. In a number of cases that I have followed, no evidence of organic disease has been found and the electroencephalographic patterns eventually became normal.

Are abnormalities or inadequacies of function found in assessment related to learning disability? Do they play a part in the learning disability or are they coincidental? The reason I ask this question is that I believe a large number of people, if given the intensive type of assessment given to children with learning disabilities, would show a number of areas of inadequate function. In these individuals the areas of inadequate function are not producing any general or specific effect on their learning abilities. I am particularly interested in this because I tend to have a problem with auditory memory. I remember very little of what I learned at bedside clinics and almost all the material I remember has been either written down or taken from texts. I am obviously a visual animal as far as learning is concerned, but in spite of the auditory defect was able to learn with reasonable facility. I believe that in our assessment we must determine the relationship between our findings and the disability.

What is the relationship between definite organic disease of the central nervous system and the learning disabilities? If one finds a learning disability in a child with definite organic cerebral disease, one tends to assume that the learning disability is the result of the organic cerebral disease and has an organic origin. This assumption may not be correct and in fact, in some of these children, the organic cerebral disease may be coincidental or may only be playing an associated or contributive factor in the production of the learning disabilities. The reason I mention this is that I have seen a number of children with cerebral palsy and head injuries who have had problems in learning which I believe are not entirely due to the organic disease. When we went into the picture in detail we found other individuals, in fact sometimes quite a few individuals, in their families who had problems in learning, often similar problems. One cannot help feeling that in these children we are dealing with learning problems with both a constitutional and an organic origin.

Problems in Prognosis

Can we detect in the early years those children who will have educational problems when they begin school? A number of studies suggest that we can, but a number suggest that we cannot. I am not referring to those children where a test of intelligence shows that inadequate intelligence is going to play a part in their education, but to children with special learning disabilities. I think there are several reasons why it may be difficult to detect these children. In the first place some children are immature in the pre-school years but in the school years will show accelerated growth and will function at a normal level. In the pre-school years they will be at a lower level of function relative to other children than in the school years. Secondly, in many pre-school children visuomotor functioning is just developing. Audiovocal functioning, the spoken language, has been present for years and can be assessed with reasonable accuracy. This is not so in visual and visuomotor skills; very often one cannot detect any gross abnormalities in the pre-school years but in the school years these children will show deficiencies in these areas. I think the best that we can do at the present time is to select a group of children that we suspect may have a learning disability, not *will* have, and realize that we may be correct in some of these cases but not in all.

In the early grades of school, can one detect the child whose learning problem is due to developmental delay, whose problems are maturational, who should have a good prognosis later on and who probably needs acceptance and tolerance more than intensive remediation? This I feel is difficult and in many children impossible. However, I think there are some things which suggest this possibility — a family history of individuals who have had similar problems and general immaturity in total development, physical, social and emotional.

What is the ultimate level of those individuals whose problems are not maturational? I have been concerned for some time by statements that these problems can be resolved by early detection and remediation. One is left with the impression that with enough facilities all these children will overcome the disability, go on to high school and university. This is not what one sees in practice because many of them show persistent defects on repeated testing and it is my impression that many of these defects are permanent. On the other hand, I think that many of the children make better progress than was anticipated when they were originally assessed. There are a number of reasons for this. The children's relation to school is different; they do not resent it or resist it as much as they did. Courses are tailored to their disabilities; they are allowed to move ahead and not kept back because of failure in certain subjects. For example, in high school children may take Grades 12 and 13 in Mathematics or Science and be at Grade 8 or 9 levels in other subjects. In the past education was almost a lock step phenomenon and one could not pass until one had completed all the work of the grade. Now children are able to progress in specific areas up to the level of their ability.

Problems in Remediation

What is the value of the programs used at the present time? I feel that we should, if at all possible, critically evaluate these programs. Actually I think that very few of the programs have themselves been adequately assessed and have been adopted by most of us with minimal critical appraisal. When a child improves it is often felt that the program has been responsible for the improvement. This may not be true — the improvement may have been due to factors other than the program itself. There are a number of such factors which will affect the educational process. First of all, detection and diagnosis produce a change in the attitudes of parents and teacher to the child and of the child to himself. There is a reduction of pressure to a level where the child is able to achieve success. He is given attention by teachers who are interested in him and who are attempting to improve his interest and motivation. All these factors influence his education.

We have looked at a number of teachers whose techniques vary but we have found them all warm, interested, stimulating, encouraging and dedicated teachers. *We have often wondered whether the teacher is not more important than the techniques.*

I think we should look at the general principles underlying education. For example, should one teach to strength or to weakness? How much time should one spend in attempting to improve areas of weakness before moving on to utilizing other strengths? I suspect the answer to this is to work on the areas of weakness and to see how much progress is made. If adequate progress is made, continue; if not, shift to another approach. However, I think this should be decided on a more critical and definitive basis.

What are the values of programs planned to correct specific areas of weakness or dysfunction, programs to improve inadequate basic language, programs to improve inadequate memory, programs to improve inadequate perceptual skills? In the first place are these programs effective in correcting the basic defects, in the second place do they lead to improvement in the fundamental academic problems, for example, reading and spelling? I think one cannot be too certain about this because one seeks individuals in whom these programs produce improvement in both the basic defect and the specific subject, but one also sees children in whom there has been an improvement in the basic defect but no associated or significant improvement in the over-all educational deficit.

What is the value of motor exercise programs in learning, for example the Kepphart? There has been a tremendous emphasis on these programs. Many of these children have motor and sensory defects on intensive examination and it has been suggested that if we correct these sensory and motor defects there will be improvement in perceptual and conceptual skills. Personally I question this. I feel that these programs are valuable in the education of the child — they are enjoyable, the child achieves success, to some degree he improves his motor skills and in following out the program develops improved skills in organization. However, I am not at all certain that these programs lead to improved perceptual and conceptual skills. I feel they should continue because they are enjoyable and because one of the basic principles of effective education is to make programs interesting and enjoyable. However, I think that we should be aware of what we are actually achieving by these programs. I have been particularly concerned because I have known a number of parents who have become very involved in programs and their children have followed them at home, at school and on the weekends. This has caused tremendous pressure on the children for whom the programs have become a burden.

Some Concluding Thoughts

I have recently become concerned about plans to place all children with learning disabilities in the regular classrooms. One school board plans to set up a system which will have no special classes but will handle all children in the regular classes. This means a wide variety of children in a given class, children of different ages, intelligence, skills, personalities and physical defects. It has been planned on the principle that the child feels different in special classes where he is educated away from his neighbours and friends. I think the authorities have not realized that the child will continue to feel different in the regular class. He will be older than the other children and be unable to do the work they are doing. Teachers of such classes will have to be specialists in many areas of education and it may be difficult for the average teacher to provide this type of service. Many of them may be uncomfortable and their discomfort may affect their efficiency as a teacher.

I think there is no doubt that the basic principle of integration is sound but it is clearly necessary to provide certain specific programs. One of these would be to have the children in a small, special class for much of their academic work, but be integrated with their age group in such areas as music, art, physical education, etc.

Another would be to have the children in a regular grade with withdrawal at specific periods of time to a small group or even a one-to-one situation with a remedial teacher. Even under these conditions it is probable that the general level of the children would be below that of the class in which they are placed.

On the other hand, I am certain that a certain number of these children will need special programs which are impossible to provide in the context of the regular classroom and that there would be for them a continued need for small classes with special programs, specifically prescribed for their learning disability. All the children with problems in reading will not receive identical programs but rather programs tailored to their specific needs and hopefully based on the origin of their educational problems.

III. Elementary Classroom Teachers

The role of regular classroom teachers has been described as crucially important in the remediation of specific learning disabilities (Tompkins, 1971). The current emphasis on leaving learning disabled children in the regular classroom has certainly contributed to this importance. Additionally, regular classroom teachers are being requested to help both identify and assess those children who might be potentially learning disabled. The role of the regular classroom teacher is defined by both increased awareness and responsibility. It is based upon the current trend in special education toward actively involving the teacher with learning disability specialists, with the learning disabled child himself (Wallace & McLoughlin, 1975) and with his parents.

The regular elementary classroom teacher usually sounds the first alarm about a child who may have learning disabilities.

How Can I Tell?

Elementary classroom teachers in British Columbia have seen a reduction of pupil/teacher ratio and an increase in learning assistance services in the last five years. These conditions have given more time to observe and identify children who may need special help.

Research has shown that the best person to identify exceptional children is the good, experienced classroom teacher. But what are we looking for?

Faas (1976) identified the most frequently mentioned characteristics of learning disabled children as:

Ability Level

1. Average
2. Near Average
3. Above average academic ability.

Activity Level

1. Hyperactive — Constantly engaged in motor activity, restless tapping of finger or foot, jumping out of seat or skipping from task to task.
2. Hypoactive — The opposite of hyperactivity. Fails to react or seems to do everything in slow motion.

Attention Problems

1. Short attention span/distractible — Easily distracted by irrelevant stimuli. Unable to concentrate on any one task for very long.
2. Perseveration — Attention becomes fixed upon a single task which is repeated over and over. May be a motor activity or verbal topic.

Motor Problems

1. Coordination — Generally clumsy or awkward. Poor fine and gross motor coordination.
2. Tactile-kinesthetic — Poor tactile discrimination, an excessive need to touch, poor writing and drawing performance.

Visual Perceptual Problems

1. Visual discrimination — Unable to distinguish between visual stimuli.
2. Visual figure-ground — Unable to perceive a foreground figure against a background.
3. Visual closure — Cannot fill in missing parts when only part of a word or object is seen.
4. Visual memory — Experiences difficulty remembering and revisualizing images or sequences.

Auditory Perceptual Problems

1. Auditory discrimination — Unable to distinguish between sounds.
2. Auditory comprehension — Fails to get meaning from the spoken word and/or environmental sounds.
3. Auditory figure-ground — Unable to attend to important auditory stimuli by pushing all other auditory stimuli into the background.
4. Auditory closure — Cannot fill in missing sounds when only part of the word is heard.
5. Auditory memory — Experiences difficulty remembering and reauditorizing auditory stimuli or sequences.

Language Problems

1. Speech development — Delayed or slow development of speech articulation.
2. Formulation and syntax — Unable to organize words to form phrases, clauses, or sentences which follow standard English grammar.

Work Habits

May organize work poorly, work slowly, frequently confuse directions, or rush through work carelessly.

Social-Emotional Behavior Problems

1. Impulsive — Fails to stop to think about the consequences of behavior.
2. Explosive — Displays rage reaction or throws tantrums when crossed.
3. Social competence — Often below average for age and ability.
4. Adjusts to change — More slowly than others.
5. Mood varies — From hour to hour.

Orientation Problems

1. Spatial organization — Poorly developed concept of space, distorted body image, trouble in judging distance and size, and difficulty in discriminating figure from ground, parts from the whole, and left from right.
2. Temporal concepts — Disoriented in time, experiences trouble relating concepts like before and after, now and then, and today and tomorrow.

Academic Disabilities

Problems in reading, arithmetic, writing, and spelling.

Every learning disabled child does not, obviously, manifest all of these characteristics, but rather a unique combination of such traits.

From: Faas, L.A. *Learning Disabilities* Atlanta: Houghton Mifflin, 1976.

What Can I Do?

As a classroom teacher your most important task is to record observations and save work samples. When you are concerned about a student, start a file of information. This should include:

Work Samples

Samples of work in all areas of concern dated and collected to show progress. You should always identify what the task was and you might want to attach a copy of your expectations and how other pupils responded.

Observations

These should indicate how the student works best. Try different types of presentations and tasks and see where he responds and where he has trouble.
Examples might be:
What does he do?
— if directions are only on the board.
— if directions are only given orally.
— if directions are written at the top of the paper.
— if a combination of 2 or 3 methods are used.

What does he produce?
— if a written assignment is expected.
— if copying from the board.
— if copying from a book.
— if listening to a record or tape.
— if looking at a movie.
— if looking at a filmstrip.
— if looking at a set of pictures.

What is his attention span?
— reading silently.
— different listening activities.
— completing a written task.

This information will help you, parents, administrators, and any other professionals who will be involved with the students' assessment.

These work samples should be collected as the teacher begins a three step process.

There are three things you should do if you have some concerns about a student:

1. Be sure he has had a good vision and hearing test. Very often teachers have found a student who seems to have problems and they have assumed that the student's hearing and vision have been screened and tested. Make sure. Check the records. If you suggest a more precise test explain why. Use your observations and examples to explain why you are concerned.
   Examples:
   — He cannot copy from the board even when sitting in the front of the room.
   — He squints and holds the paper close to his eyes when we have a typed worksheet.
   — He does not like to use the listening station and says it hurts his ears.
   — He cannot follow directions on the playground or in the gym.
2. You should check your lesson plans and teaching presentation to make sure you are presenting material in a variety of ways. Check your assignments and see if you can vary your expectations.
3. The teacher needs to consider whether the child should be referred for special assessment and help.

If you are certain the student's hearing and vision are intact and you have varied your teaching presentations and activities and still cannot discover a way to help the child in the classroom, information for referral should be gathered. This should include:
— all observations.
— work samples.
— tests and reports on file.
— teacher's statement of specific concerns.

Where Can I Find Help?

Suggestions for the Classroom Teacher
School District No. 27. Adaptation of M. Golick

The following section of reprints will give you a variety of ideas for the regular classroom. School District No. 27 (Cariboo-Chilcotin) has adapted materials from Margie Golick of Montreal Children's Hospital.

A checklist of reading difficulties (Ekwall, 1970) is included to give the teacher an opportunity to observe reading behavior in the classroom.

School District No. 10 (Arrow Lakes) has provided information on Preventing Reading Failure, Corrective Instruction in Reading, Omissions and what to do with Word Lists.

Information on the teaching of spelling and a diagnostic spelling test are also included in this section.

This is a small selection of the many materials produced by professionals and publishers for exceptional children (a list of publishers is included in the appendix).

The Association for Children with Learning Disabilities has produced materials for teachers that are reproduced at the end of this section.

Suggestions to the Classroom Teacher for adjusting the regular program to meet the needs of the child with a learning disability. (Excerpt from "Learning Disability" by Margaret Golick — Senior Psychologist, Learning Centre, Montreal Children's Hospital)

While a child is working to overcome his disabilities, we need to try to keep him from becoming discouraged at school. Even expert remedial help cannot eliminate the need for modifying the demands in the classroom. Following are some suggestions gleaned from school teachers of children we see at the Learning Center:

1. **Lower the standards for acceptable handwriting.** Many children will never be able to develop enough skill to write beautifully when they have to get up speed. One boy who produced totally illegible answers to examination questions was allowed by his teacher to recopy them at his leisure when the other students had left. As soon as time pressures were removed, he could manage to form letters that could be read.

2. **Reduce the amount of written work that has to be done.** Some children who are slow, laborious writers are burdened down by their arithmetic assignments where they have to copy examples from the book. They have no time to play, think, talk or watch television because the whole afternoon and evening is devoted to copying down numbers and writing-in the answers. If the aim of this kind of homework is to give practice in computation, consider mimeographed sheets where only the answer has to be filled in, or ask parents to copy the examples and let the child fill in the answers.

3. **Encourage the child to learn to type and permit him to type assignments.** Permission to bring his typewriter to class changed life entirely for more than one youngster.

4. **Consider the use of the tape recorder.** In extreme cases of writing disability, a child may be allowed to dictate compositions, or even examination answers. Tape recorders are useful, too, for the child who has trouble following classroom lectures or discussions.

5. **For children with severe spelling disability, reduce the number of words they have to learn for the weekly spelling lesson.** Don't penalize spelling mistakes in other subjects. It is very demoralizing to fail a geography test when you knew the answers, but wrote them as Paccific Oshun; Ostrailya; Affraka.

6. **Where there is little hope of success, eliminate the second language requirement** — at least temporarily.

7. **Give alternate assignments.** For a younger child who cannot pay attention to a story, give him something to do while the others are listening. It might be pictures or a text to follow along with, or something concrete to do that is vaguely related to what the rest of the class is doing.

8. **Try to cut down distractions.** Consider having a distractible child face a wall, and maybe even screening him off occasionally when he has to do a page of arithmetic or an assignment in a workbook. Teachers often refer to it as "Johnny's office — to help him concentrate". Occasionally, someone else is allowed to use the "office" when he has a job that needs great concentration.

9. **Take some of the embarrassment out of the program by clever planning.** One very flexible school kept a 13-year old girl who had great trouble learning arithmetic with her peers where she belonged. But three times a week, when the Grade VII had their math lesson, she was assigned to help teach arithmetic to Grade I, where the children were using Cuisenaire rods. The teacher there was grateful for another pair of hands. The teen-age girl got the satisfaction of helping as well as the drill she needed to understand the operation of addition, subtraction, multiplication and division.

10. **See that a child with a reading disability has the opportunity to make liberal use of films, film loops, records, tapes, television programs** to compensate for his inability to keep up with texts and consult encyclopedias. The National Film Board of Canada has hundreds of films that complement the school curriculum in geography, history and science.

11. **Give the child with the learning disability some jobs to do that make a contribution to the class and at the same time help with concepts of space, time and number.**
    - (a) For example, have him check the thermometer every day and record the date and the temperature.
    - (b) Make a class schedule.
    - (c) Make a map of the school and classroom.
    - (d) Write down the teachers' names and the grades they teach.
    - (e) Make a class list, with addresses and phone numbers, and perhaps the birthdays of everyone in the class.
    - (f) Get a neighbourhood street map and mark in the houses of the children in the class.
    - (g) List all the streets in a ten-block radius or in the school district. Find out the names of city officials, where municipal buildings are, etc.
    - (h) Make family trees. Write in names of brothers, sisters, parents, grandparents, aunts, uncles, cousins.

All of these things are precursors to learning geography, history, science, and give plenty of practice in reading, writing and spelling.

12. **Choose some open-ended activities for the whole class that sharpen everyone's perception and general awareness.** Have the children list all the noises they can hear as they sit in class; list all the smells, list everything they see, list all the colours in the room, and so on. Some will have long lists, some will have short lists. The less able will learn from the able, but everybody will get practice in scanning, discriminating, labelling, spelling and writing.

13. **Modify the report card, as well as the program.** In some excellent schools with good remedial assistance, the children with learning disabilities are given report cards that rate them in the same way as the other children in the class. So a child who has begun to make progress in reading for the first time in his school career, but is still far behind his peers, gets an "Unsatisfactory", and all his newly-won confidence is shattered. Parents, too, need a more meaningful appraisal that reflects their youngster's gains and acknowledges the obstacles he is up against. Parents of children with learning problems so often feel a sense of isolation and helplessness in the face of constant complaints and criticisms about their youngster's level of achievement. It would do a great deal for everyone's morale if there were a chance for a teacher to look at a pupil from other angles and let his mother find out that somebody else besides her sees what a nice child he is.

Reading Diagnosis Sheet

Ekwall, Eldon E., **Locating and Correcting Reading Difficulties.** Columbus, Ohio: Charles E. Merrill Publishing Company, 1970, p. 5.

	3rd Check	2nd Check	1st Check	
1				Word-by-word reading
2				Incorrect phrasing
3				Poor pronunciation
4				Omissions
5				Repetitions
6				Inversions or reversals
7				Insertions
8				Substitutions
9				Basic sight words not known
10				Sight vocabulary not up to grade level
11				Guesses at words
12				Consonant sounds not known
13				Vowel sounds not known
14				Blends, digraphs or diphthongs not known
15				Lacks desirable structural analysis
16				Unable to use context clues
17				Fails to comprehend
18				Unaided recall scanty
19				Response poorly organized
20				Low rate of speed

21 High rate at expense of accuracy

22 Voicing-lip movement

23 Meaning Vocabulary requires improvement

24 Written recall limited by spelling ability

25 Weak in written language skills

NAME ____________________ TEACHER ____________________

GRADE ____________________ SCHOOL ____________________

The items listed above represent the most common difficulties encountered by pupils in the reading program. Following each numbered item are spaces for notation of that specific difficulty. This may be done at intervals of several months. One might use a check to indicate differently.

D—Difficulty recognized
P—Pupil progressing
N—No longer has difficulty

OTHER RELATED ABILITIES

SILENT READING

ORAL SILENT DIFFICULTIES

ORAL READING

Preventing Reading Failure

School District No. 10 (Arrow Lakes)

1. Delay formal instruction in reading until the child is ready.
   - *Readiness (the teachable moment) for each subsequent step is crucial too!
2. Have a systematic objective testing program as well as observation and informal testing.
   *Knowing strengths and weaknesses help you teach more effectively.
3. Have instructional material diversified in difficulty and content at each grade level.
   *Achievement and interests vary greatly in the average classroom.
4. Ensure that retarded readers are using material at their instructional not their frustration level.
   *Attempting to teach a pupil with materials that are too hard for him is a colossal waste of time.
5. Provide systematic instruction in basic skills using varied methods. Strive for a high level of mastery of word recognition in the primary grades.
   *The weaker the reader the greater should be the emphasis placed on mastery.
6. Use adequate and appropriate corrective techniques and materials to eliminate reading difficulties when they first arise.
   *The golden era for prevention is in the primary grades.

Corrective Instruction in Reading

School District No. 10 (Arrow Lakes)

Basic Considerations

The teacher's attitude toward the child is important. The teacher's first obligation is to create the feeling that the child is accepted in the classroom in spite of his reading deficiencies. The teacher must help the child face his problem, set realistic goals, and provide tangible evidence of progress.

Motivation makes the child receptive to learning. The teacher may help to motivate the child in these ways:
1. Secure the learner's cooperation.
2. Begin instruction at the pupil's level.
3. Take small steps and reinforce success.
4. Keep learning tasks and materials meaningful.
5. Use various aids to help the pupil remember.

Organizing for Corrective Instruction

1. Set up a reading area in your classroom suitable for small group instruction. Movement to the area should not interfere with other classroom activities. Keep reading materials, games, devices, etc., in or near the area. Plan to be near an electrical outlet for using the overhead projector, filmstrip previewer, tape recorder, etc.
2. The teacher must be well organized. Plan well in advance and have materials ready. Keep files of ideas and worksheets.
3. Set up routines for the children involved. Routines in regard to the class as a whole and routines within the group.

4. Schedule the main part of corrective instruction for the reading period, but look for short periods to use throughout the day.
5. Have a repertoire of useful seat work and activities for independent or group work.
6. Have children help each other, especially for easy oral reading practice. Children can write out questions on a story for other children to answer. They can print word lists, flashcards, dramatize stories together, and work as partners on many tasks.
7. Throughout the day look for opportunities for the child to put his reading to use. Integrate the reading with other school subjects.
8. Keep simple records of progress. Children can keep their own records.
9. Provide lots of easy practice.

Omissions

Recognized by pupil omitting letters, words, or phrases when reading. Omissions could be the symptom of poor word attack skills or merely a bad habit. Give the pupil much easy reading material for a time. If omissions continue to occur it may be assumed they are the result of a bad habit.

Remediation

1. If the omissions are due to word attack difficulties, find out whether the pupil is deficient in phonics, structural analysis, or the use of context. If he is, remediation must focus on improving these skills.
2. Check out his sight vocabulary level using the Dolch 220 Basic Sight Vocabulary Words.
3. If it is merely a bad habit —
    (a) Draw the reader's attention to the omissions immediately when he is reading orally.
    (b) A paper guide is helpful to young readers. Use a piece of paper ½ x 2 inches long with a 'handle'. He can move this paper along the line of print as he reads. Discard this aid as soon as he improves.
    (c) Ask detailed questions which require thorough reading using only one sentence or paragraph at a time. This is especially useful when the pupil tends to omit adjectives.
    (d) Give concentrated help with root words and endings. This often helps with the omission of word parts.

What to Do with Word Lists

A. Dolch List of 220 Sight Words

1. Use it to test a pupil's knowledge of the basic sight words at each of the five levels — PP, P, 1, 2, 3.
2. Write the errors as the pupil reads the words. Look for a pattern in the errors; e.g.,
    — use of the initial part of the word only
    — difficulty with short vowel sounds
    — reversals of letters or letter order. Take suitable steps to correct the problem.
3. Have the pupil learn the words he does not know on each list.
4. Retest periodically until the list is mastered.
5. Use the tables given to help estimate instructional reading level.
6. The known words can be used as the basis for analytical teaching of phonics; e.g. big — substitute known consonants for the initial 'b' — pig, dig, fig, jig, rig, wig.
7. Have pupils make rhyming words for selected words, e.g., can — fan, etc.

B. Fry 600 Instant Word List

1. Teach the words one group at a time. Each pupil can have a copy of the list in a folder. Have him write the words that he needs to learn. Keep reviewing the words that give difficulty.
2. Pupils can find all the words with a particular vowel sound and write them **or** all words beginning with th, etc.

3. Use the groups for spelling lists.
4. Find naming words in a specified number of groups, e.g., to the end of Group 5.
5. Find all the words on pages one and two that you could use to tell how many, etc.
6. Select words to find homonyms and antonyms for; e.g., good, little, out, old.

C. Phrase Lists

Have a copy of the lists for each pupil to keep in his folder.

(a) Pupils can use the Dolch phrase list to
- — read column by column with the tachistoscope
- — combine numbered phrases to make sentences; e.g. 7, 35, 71
- — combine phrases freely to make sentences
- — add starting words to phrases to make sentences; e.g., find 5 phrases to complete this sentence. Tom ran ____.
- — select all the phrases that tell "where something might have happened"
- — find 6 phrases with describing words
- — find 6 phrases with 'family' words, e.g. mother
- — find phrases having numbers in them
- — find phrases with colour words
- — all phrases with 'pronouns'
- — make sentences of scrambled cards with the phrases on them

(b) Using the Prepositional phrases pupils can
- — make sentences using suitable phrases along with starting words such as Tom ran ______. Specify how many sentences you expect.
- — have cards with nouns, verbs, adverbs and some of the phrases; e.g., The ball - rolled - slowly. Pupils can choose combinations to make sentences.

(c) Common clauses and phrases can be used for matching with a group of 10 simple sentences to make a complex sentence; e.g., We will go, I saw the treasure, We will be pleased, We know, I laughed, The rain started, They ran to the tree, That was the reason, John saw the boy, The weather was good. These can be used with the first group of clauses.

Uses for the Phonogram List

1. To teach phonics.
   The phonograms work well as an alternative to teaching the individual vowel sounds
   (a) when pupils have difficulty hearing these sounds, **or**
   (b) blending sounds.
2. It is very useful for pupils who are stronger in visual learning than auditory learning.
3. When pupils have not been successful with the traditional approaches to teaching phonics, the phonogram list will not be associated with failure to them.
4. The list can be used to test individually or as a group, pupil's knowledge of consonants and consonants blends.
   E.g. Using the "ack" phonogram — read each word and have the pupils write the single consonant sound or blend heard at the beginning of each word.
5. After the pupils have identified each word on a list, dictate the words for reinforcement of phonics learning through encoding.
6. Use the root words for teaching structural analysis.
   E.g. Add s, ing or ed endings
7. Group phonograms by vowel sounds, beginning with short vowel phonograms, for teaching.
   E.g. ab-ack, ack-ad, am-amp, an-and, ank-ang, as-at-atch.
   Leave difficult phonograms (e.g., awn, umble) until later.
8. Make up sentences or short paragraphs using the phonogram words from the group you are teaching. Pupils then apply skill to reading situation.

Cloze Procedure

FROM: Diagnostic and Remedial
Reading for Classroom
and Clinic
2nd Edition
Robert M. Wilson

This procedure has been developed to enable teachers to determine the ability of the pupil to read and comprehend materials (especially in the content areas) and will also indicate the ability to handle concepts as well as word and sentence structures. It also indicates the readability of materials.

1. Select at random a passage containing an adequate sampling.
2. Retype this passage, leaving out every fifth word. As a rule, neither the first word in a sentence nor proper nouns should be omitted. An example of a closure test on easy material would appear as follows:

   Nancy was anxious to ___ her birthday party this ___. She had invited some ___ to her room at school. She ___ that they would all ___ able to attend.
3. Have the pupil read the incomplete sentences, filling in the missing words. To "close" properly, the child must know the words and understand the concept; thereby anticipating the author's ideas.

Scoring:

The closure test score of 38% right is approximately equal to a test score of 75% right. Therefore, as a rule of thumb, closure scores below 40% right should be regarded as danger signs for that pupil with that material.

As the teacher gains familiarity with the closure technique, she will find it a valuable technique in deciding whether a child should read a certain book and how much help he is likely to need with the book he has selected. For example, if a pupil scored well below his peers on a closure test in a science book, the teacher has some clues to a pupil's difficulties. Science words can be stressed prior to reading. Conceptual background can be built through discussion, pictures, experiments, and so on, enabling the pupil to handle the material better.

Spelling

(Adapted) by Ves Thomas

Ves Thomas, in his Canadian publication "TEACHING SPELLING", provides several practical suggestions for the classroom teacher in relation to the teaching of spelling for children with spelling problems. The following is a summary of these suggestions:

1. Concentrate on teaching the words needed for the students' basic writing needs (e.g. Dolch word list). Studies of adult and child writing show that a basic core of 3,000 words account for about 95% of the spelling curriculum requirement.
2. A strong emphasis should be placed on visual discrimination — i.e. — words in column form or isolated rather than context. Developing auditory discrimination in conjunction with visualization is also very important.
3. Research shows most favourable results with the test-study-test plan for teaching spelling. This enables the student to concentrate upon those difficulties identified by the pre-test.
4. Research shows that the self-corrected test is the most efficient single learning procedure in spelling instruction and study.
5. The daily spelling period should not exceed 15 minutes.
6. Include fewer words, teach them thoroughly, and consistently review words of persistent difficulty.
7. Teaching rules should be regarded as an aid to spelling rather than as a substitute for the systematic study of words in the spelling list.
8. Diagnostic evaluation of the types of spelling errors (e.g. short vowel errors consistent, mainly irregular words misspelled) provides teachers with information for developing corrective and remedial programs.
9. Use puzzles, games and special activities directly related to the words being studied to supplement and enrich instruction.

Diagnostic Spelling Test

William A. Kottmeyer
TEACHER'S GUIDE FOR REMEDIAL READING
McGraw, 1959

Directions for Diagnostic Spelling Test

Give List 1 to any pupil whose placement is second or third grade.
Give List 2 to any pupil whose placement is above Grade 3.

Grade Scoring, List 1:

Below 15 correct	Below second grade
15-22	Second Grade
23-29	Third Grade

Any pupil who scores above 29 should be given the List 2 test

Grade Scoring List 2:

Below 9 correct	Below third grade
9-19 correct	Third Grade
20-25	Fourth Grade
26-29	Fifth Grade
Over 29 correct	Sixth Grade or better

Any pupil who scores below 9 should be given the List 1 test.

Diagnostic Spelling Test

List 1

not
but
get
sit
man
boat
train
time
like
found
down
soon
good
very
happy
kept
come
what
those
show
much
sing
will
doll
after
sister
toy
say
little
one
would
pretty

List 2

flower
mouth
shoot
stood
while
third
each
class
jump
jumps
jumped
jumping
hit
hitting
bite
biting
study
studies
dark
darker
darkest
afternoon
grandmother
can't
doesn't
night
brought
apple
again
laugh
because
through

List 1

Word	Element Tested	Word	Element Tested
1. not		18. what	
2. but		19. those	wh, th, sh, ch
3. get	Short vowels	20. show	and ng spelling
4. sit		21. much	and ow spelling
5. man		22. sing	of long o
6. boat	Two vowels	23. will	doubled final
7. train	together	24. doll	consonants
8. time	Vowel-consonant-	25. after	er spelling
9. like	-e	26. sister	
10. found	ow-ou spelling	27. toy	oy spelling of
11. down	ou sound		oi sound
12. soon	long and short oo	28. say	ay spelling of
13. good			long a sound
14. very	final y as short i	29. little	le ending
15. happy			
		30. one	
16. kept	c and k spellings	31. would	non-phonetic
17. come	of the K sound	32. pretty	spellings

List 2

Word	Element Tested
1. flower	ow-ou spellings of ou sound, er ending, th spelling
2. mouth	
3. shoot	long short oo, sh spelling
4. stood	
5. While	wh spelling, vowel
6. third	th spelling vowel before r
7. Each	ch spelling, two vowels together
8. class	double final consonants, c spelling of K sound
9. jump	
10. jumps	Addition of s ed, ing j spelling of soft g sound
11. jumped	
12. jumping	
13. hit	doubled final consonant before ing
14. hitting	

Word	Element Tested
15. bite	Dropping final e before ing
16. biting	
17. study	Changing final y to i before ending
18. studies	
19. dark	
20. darker	er, est endings
21. darkest	
22. afternoon	Compound words
23. grandmother	
24. can't	
25. doesn't	Contractions
26. night	silent gh
27. brought	
28. apple	le ending
29. again	
30. laugh	Non-phonetic spellings
31. because	
32. through	

Hints for Teachers of Learning Disabled Children

by N. Munro

1. Learn all you can about learning disabilities.
2. Lower your standards of printing and handwriting.
3. Reduce the amount of printed or written work.
4. Make sure all paperwork handed out is dark and clear.
5. Encourage the child to **type** — aphasic — left to right — write on b.b. copy-oral spelling and space between words, question marks? Capitals.
6. Use a tape-recorder.
7. Spelling: a. reduce a number of words to learn
   b. don't add endings or beginnings to test words
   c. don't change a spelling list
8. Give alternate assignments — written and orally.
9. Give instructions both written and orally.
10. Cut down distractions — use carralls, fewer pictures.
11. Don't try a second language.
12. Have an older child go into primary class to help a younger child.
13. At least once a day give him a job he can successfully do.
14. Praise him for small accomplishments.
15. Modify the report card for this child.
16. Tape multiplication cards on his desk.
17. Shorten the lessons.
18. Seat the distractable child away from doors and windows.
19. Don't give too many instructions at once. Go over and tell the child quietly.
20. Have a good gym program — can be done in the classroom.
21. Plan well for the hyperactive child — don't vary the routine. Help him organize himself.
22. Use a multisensory approach — print large unlined paper, go over finger, tape recorder.
23. Make your lessons exciting and fun.
24. Tell the substitute about your learning disabled child.
25. Use unlined paper for the child with visual and spatial problems.
26. There are many techniques — Frostig, Orton-Gillingham, Slingerlad, Kirk, Cratty, Kephard — use all kinds of techniques and **combinations,** different combinations of techniques.

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Detection of Children with Learning Disabilities

Compiled and written by Barbara Reid (1974)

Learning Disabilities affects a larger number of our school population than is generally realized. It is very unlikely that any teacher could teach for several years in any kind of classroom without knowingly encountering at least several such children. Some children may display behaviour which is impossible to ignore, yet others may attempt to melt into the background in hopes that they will be ignored and are thus often forgotten. Some may just quietly give up and become "dropouts" whether they actually leave the classroom but participate as little as possible. Some may compensate to the degree that they are able to produce enough to "get by on" — yet at what cost emotionally? All of these children are in urgent need of help without which they will lead a marginal or very unhappy existence instead of a normal, happy life with his choice of vocation based on interests and abilities instead of upon lack of abilities.

Therefore, it is essential that teachers and others working with these children (such as group leaders in cubs, guides, recreation leaders, public health nurses, etc.) develop a sensitivity to the behavioral manifestations so that appropriate referral and help can be obtained.

Many labels are applied to these children. Few in use today are: perceptual handicap, dyslexia, reading disability, discalculia (math difficulties), minimal cerebral or brain dysfunction, specific language disability or "brain damaged" a frightening and inaccurate term. The use of the term "learning disability" is an attempt to recognize that it is a cluster of disorders rather than a single disease or condition. No two children with learning disabilities are alike nor do they display the same symtomatology. The teacher's role, therefore, is to suspect a disorder which is hindering this child from functioning effectively and refer him for skilled testing if her own attempts at modified methods of teaching are not able to meet his needs.

The problem affects a far larger number of boys than girls. (Thus the use of the words "he, him", etc. below), though the descriptions apply equally to girls with learning disorders. Any one child may display a few of the following manifestations. No child will display the spectrum. One must be very careful not to jump to conclusions and diagnosis based on a few observations or on one particular symptom. It is the grouping or clustering of the symptoms which determines how the disabilities will affect him academically, emotionally and socially.

The following is an attempt to list the most frequently found symptoms:

ABILITIES AND ACHIEVEMENT:

1. **Achievement low in some areas — high in others**
— there may be a very wide gap between these things he does well and those he does poorly
— a graph of the results of psychological testing will show spiking in the levels of performance — not the generally depressed level of performance of the child

2. **Verbal assignments on a far higher level than written work**
— oral testing may reveal a gap of even three years between what he can produce on paper and what he could produce orally

3. **Drawing**
— primitive and immature — little or very low ability at age 5 or 6, stiff, stilted and uncontrolled
— watch for a persistent angle to his work: ex. people and houses on a slant
— spatial disorganization: ex. the wheels of a car on the top of the car or people up in a corner, unrelated to the rest of the picture, etc.

4. **Reading**
— generally poor reading ability — slow or apparently unable to learn to read
— phonics: no phonetic attack — confusion of short vowel sounds — inability to attach sound to symbol
— poor sight recognition of words
— confusion of letters and words that look alike: ex. m and n, p and q, u and n, i and l
— reversals of letters and words: ex. was for saw, b for d, etc. — also inversions: ex. M for W, n for u, etc.
— reading seems to involve a lot of guess work and substitutions: he may get the first part of the word; guess the rest — substitutions such as synonyms when reading aloud
— difficulty in blending: he may be able to sound out the parts of a word but when he puts them together, he either cannot do so or may jumble them, ex. Selkirk comes out Sklirk, etc.
— comprehension may be excellent unless a key word is missed
— comprehension may be poor with silent reading — many of our reading tests depend upon silent reading, but when reading aloud or with the auditory reinforcement of the tape recorder may increase 100%
— following a line of print is difficult — use of finger to follow the line and "keep my place" — repeatedly loses place in reading: if he looks away to his work book or to the teacher or blackboard, he cannot find where he left off
— mouths as he reads silently (see above)

5. **Writing**
— difficulties related to those described above in reading
— cannot visualize words he wants to write and then to translate that into the motor action of writing
— writing is often "sloppy" and disorganized on the page: he is the last in the class to begin with lined paper since the use of lines eludes him
— he constantly erases — knowing his work is poorly done; though constantly trying to better his performance, it often worsens
— printing is often more difficult than writing for him since printing requires constant re-location of a starting point

6. **Creative Writing**
— usually produces very little — often a sentence or two is the result of an hour's work
— one student explained his reason: "less to mark wrong"! — a rather sad indictment of our teaching methods
— he usually does better with specific factual material than with fantasy

7. **Spelling**
The letters may all be there but out of order or sequence — his writing therefore, looks "like a foreign language".
— no use of phonic clues: letters and syllables often omitted
— alphabet: able to recite only in entirety: could not place

any given letter — even in the first or last half
— no apparent "rhyme or reason" to spelling

8. **Number Concepts**
— poor number concepts
— cannot relate quantity to symbol
— rote learning difficult: may be able to **understand** increasingly difficult math but cannot remember the basics such as simple addition and subtraction, times tables, etc., this may plague him into high school years
— unable to carry number in his head — "mental arithmetic" eludes him
— geometry difficult: working with dimensions difficult since he may not be able to see total figure or object

9. **Money**
— poor memory for denominations and little ability to use money

10. **Telling Time**
— may be difficult for him to learn

11. **Map Reading and all Map Skills**
— may be impossible or meaningless because of visual spatial disorganization

12. **Series**
— trouble in remembering series such as days of the week, months of the year, alphabet, etc. unless sung or recited from the beginning

BEHAVIOUR:

1. **Short attention Span**
— restless

2. **Hyperactive**
— always "on the go" — a "driven child"
— he always seems to need some physical activity

3. **Hypoactive**
— he may show the reverse of hyperactivity — may switch from one state to the other i.e., both overactive or underactive
— may be slow moving: always seems to be in slow motion
— speech is often slow also

4. **Highly Distractible**
— actually he is too attentive: i.e., he attends to all the stimuli which are bombarding him at any given time
— this not only hinders his own work but disturbs others

5. **Impulsive**
— cannot refrain from speaking out — often remorseful afterward but apparently cannot correct this behaviour himself

6. **Repetitive**
— in many areas: repeats words or parts of words on page
— repeats physical activity: ex. jumping, running in a circle, etc.
— behaviour in class may be repeatedly "bad" regardless of punishment

7. **Disorganized**
— can't organize work: doesn't know where to start or how to complete a task
— notes are sloppy, out of order
— constantly losing his belongings: pencils, hats, erasers, etc.

8. **Forgets Assignments and Directions**
— may get only the last of a series of instructions — each succeeding instruction actually cancels out the previous one

9. **Easily Frustrated**
— gives up before giving a task a "reasonable try"
— may have severe temper outbursts when frustrated

10. **Lacks Flexibility**
— upset when schedule or routing changes — feels people are letting him down if plans have to be changed
— switching — difficult for him to switch from one activity to another "I just got started" — this is often one of the first signs of difficulty

11. **Pressure: Response to Poor**
— where other children might be motivated to try harder with pressure, he is incapable of coping — he becomes panicky
— frequent crying spells may occur — beyond the primary grades
— persistent high level of anxiety

12. **Fearful of Trying New Skills**
— conditioned to failure — expects failure and therefore will not try

13. **Decision Making Difficult**
— particularly if many choices are offered — then is usually dissatisfied with the choice he has made

14. **Extremely Literal**
— "cut that out" to us means "stop" — to him it presents a problem because he can see neither the scissors nor the picture to "cut out"
— humour often missed — and therefore confusing
— sarcasm: may be missed but often very upsetting because his shortcomings are merely alluded to so he cannot understand the disapproval of others

15. **Emotional Lability**
— sharp and sudden changes in mood
— response may be all out of proportion to the situation
— he is easily hurt: often strikes back — physically since he may not have the verbal facility under stress

16. **Inappropriate Emotional Response**
— when tears are expected, he may laugh, etc.

17. **New Friends**
— relates poorly to peers — either has no friends or worries about lack of friends
— his extreme and sometimes unexpected emotional responses hamper his social relationships

18. **No Sense of Rhythm**
— affects ability to switch, spelling, rote learning and even speech

19. **Unable to work either alone or in groups**
— see #17, 15, 7 and 8

20. **Unpredictable**
— this may be one of the most difficult of his characteristics to live with — both for him and those around him
— he is a disaster waiting for a place to happen

21. **Self Confidence Lacking**
— this is listed last because it is a result of at least some of the above symptoms
— one of the most obvious signs but too **often considered the cause** for difficulties when it is actually **one more of the symptoms** of his learning disability

Language:

1. **Expressive**
   - trouble telling a story — words tumble out in a jumble
   - often can't find a simple word such as a common noun although his vocabulary may be quite adequate (or more) for his age.
2. **Poor Language Usage**
   - "I have brang", "The bird Flewed"
   - mixture of tenses
   - syllables out of order in speech as well as in spelling
   - will often substitute a shorter word when word will not come out right
   - his spoken language may, therefore, be far below his vocabulary level
3. **Speech**
   - may be slow or slurred
   - he may drool or seem not to know what to do with the saliva which collects when he talks (no obvious neurological basis either)
4. **Confusion of Similar Sounds**
   - often shows up in written work as well as speech, ex. ch for sh or ck, g for k, p for t, s for z, etc.

CONCEPT FORMATION:

1. **Difficulty in forming concepts**
2. **Problems in Generalization and Categorization**
   - ex. cannot see where the solution to one problem might help in another — in social situations as well as math, reading, etc.
   - cannot relate new knowledge to that already acquired
   - no "pegs" to hang new knowledge and experience on
   - resultant necessity for instructions to be re-explained for each new assignment
3. **Research Skills Weak**
   - not only because of poor visual and reading skills but poor concept formation, unable to categorize and generalize.

COORDINATION:

1. **Clumsy**
   - may be good in some sports, poor in others, ex. soccer requires eye-foot coordination, baseball requires eye-foot, a greater degree of eye-hand coordination, balance, rhythm, distance perception, etc.
2. **P.E. and Recreation may be torture for him**
   - though adequate in some areas, he is often afraid of being given some task in which he cannot perform and being criticized for letting his team down
   - fear of not being wanted when teams are chosen
3. **Balance Poor**
   - cannot regain balance if threatened
   - may be very one-sided in movements and abilities, ex. hop on one foot but not the other
4. **Awkward Gait**
   - may walk with head or even whole body tilted to one side
5. **Poor Posture at Desk**
   - adopts awkward posture position such as head down on desk when he writes — may be using only one eye
6. **Hand Preference Late in Being Established**
   - may continue to switch from one hand to the other
7. **Right-Left Orientation (laterality) Poor**
   - difficulty in sorting out directions involving right and left
   - in writing, may manifest itself in substitutions of b for d,etc.
8. **Directional and Spatial Sense Poor**
   - no "sense of direction" — fear of being lost if he goes on bus alone
   - bumps into people and objects repeatedly
9. **"Accident Prone"**
   - may have many accidents (broken bones) because of misjudgement of distance and poor coordination
10. **Poor Body Image**
    - shows up in drawings where parts of body are inappropriately placed, omitted or disproportionate
    - no "inner map" or awareness of his body and its relations in space
11. **Fine Motor Coordination: difficulties**
    - printing and often writing poor although because of its flow and lack of constant need of spatial orientation, writing may be easier than printing
    - difficulty in staying on the line, messy writing.

Thus the learning disabled child in your class may be a quiet child who seems alert but appears to be restless, a poor speller and weak in arithmetic. Or he may be a sloppy, clumsy, noisey, disruptive, dynamo whose absence is noted first by the apparent calm in the classroom. He may be quiet, cooperative and productive one minute and the next, have the whole classroom in an uproar.

It is important to have him assessed and determine whether he can control his behaviour — whether he can learn spelling and arithmetic as others appear to do. If he has some disorder which impedes his learning, his future skills will be based on flimsy and imperfect foundations. If remedial help is witheld until later years, he will have to unlearn faulty habits, rebuild new skills and then re-learn the academic subjects based on those imperfect skills of previous years. On top of this, these children naturally have negative emotional overtones which may develop into "behaviour problems" which demand and receive immediate though often harsh and inappropriate handling. Too often, we are attempting to remediate the academic and behavioural weaknesses and ignoring the faulty basic learning skills from which the academic and behavioural problems stemmed.

Today often these children are considered to be naughty or "rotten kids" by their parents, teachers and neighbours. It is assumed they are not trying and are quite capable of behaving in a more acceptable fashion. Their lives, therefore, become a series of rebukes and punishments. They feel they can do nothing properly and can please nobody. If not referred for suitable help, they soon become emotionally disturbed and no longer try to learn. By the time he reaches the age of puberty though, he then may begin to outgrow some of his problems, teachers and often parents have already "given up" — too soon!

So, if you suspect a child in your classroom has a learning disorder which is inhibiting his acquiring a good foundation in basic skills, do not assume he is bad, his parents are fighting or he is suffering from lack of self-confidence — investigate his problem! Ask for specific directions as to how you can present the work to him in a meaningful manner. How can your classroom be modified to help him to cope.

Remember that learning disabilities do respond to retraining; the prognosis is usually good. Do not give up **even** because he is too old. He is **never** too old for help. Help us to discover and help such children so they can become the happy, productive adults of tomorrow.

IV. Elementary Learning Assistance Teachers

The role of learning assistance teachers is to assist any children in the school who have learning problems. To make effective and efficient use of learning assistance teachers' time it is important that the observations of classroom teachers' be used to give a referral for special services. These were noted in the previous section.

When Do I Intervene?

The learning assistance teacher intervenes when a referral has been made by the classroom teacher. The teacher gives as much information as possible. The learning assistance teacher will then organize services necessary in the areas of assessment, direct services and consultation.

The learning assistance teacher is cautioned about the process of diagnosis by Hickey and Hoffman (1973).

The process of diagnosis in an instructional setting has been likened by some to the medical process from which the term has its roots (i.e., a doctor examines the patient's symptoms and the pattern of these symptoms leads him to the **diagnosis** that a certain disease or dysfunction is present).

However, this analogy is spurious. It implies that the learning diagnosis identifies or defines a knowledge "disease" or a disorder rather than a specific need or a cluster of needs, which is what actually takes place. Diagnosis in education, then, is actually a **needs assessment process.**

How Do I Assess?

Armed with referral information the learning assistance teacher needs to observe carefully the teaching/learning situation for any important interaction that may give more information about the student's learning behavior.

Testing should be considered very carefully. Every test given should have a specific purpose and the tester should know how the results will be used. Two types of tests are available. They are norm-referenced and criterion-referenced. These have been discussed by Housden and LeGear (1973).

Norm-Referenced	Criterion-Referenced
• Evaluates individual performance in comparison to a group of persons.	• Evaluates individual performance in relation to a fixed standard.
• Is used to evaluate a student as "below grade level," "at grade level," or "above grade level."	• Not concerned with grade level descriptions.
• Fails to indicate where students have mastered the spectrum of instructional objectives.	• Identifies the individuals who have mastered the spectrum of instructional objectives.
• Generally poor aides in planning specific instructional programs.	• Geared to provide information to be used in planning instruction.
• Is often vague in relation to instructional content.	• Is content specific.
• Does not operationally define mastery and/or success.	• Operationally defines mastery and/or success.
• Applies poorly to the individualization of instruction.	• Applies directly to the individualization of instruction.
• Is not concerned with task analysis.	• Depends upon task analysis.
• Test results interpreted in reference to a person's position in relation to the scores of others.	• Test results interpreted in reference to a person's position in relation to the curriculum.

— adapted from Housden, J.L., & LeGear, L. An emerging model: Criterion-Referenced evaluation. *Thrust*, April 1973.

Wallace and Kauffman (1973) outlined an assessment procedure utilizing informal and formal test procedures.

Teacher Observation

Many of the elements that will be utilized in planning an instructional program can be easily detected in everyday classroom behavior. The only diagnostic tool that is required for this level of evaluation is a keen observational eye. For example, teacher observation of a child's behavior while attacking a word in a reading passage provides information which can be used in assessing instructional needs. Similar information is obtainable through the administration of diagnostic tests; however, these tests are unnecessary if the teacher can provide identical information through daily interactions with the child. During the observation stage of evaluation, the teacher must be aware of specific behaviors exhibited by the child.

For example, in reading instruction the teacher should initially ask himself the question, "What does the child do when he is reading and is confronted with a word that he does not know?" Responses to this question could include:

1. "Usually stops and refuses to respond".
2. "Looks at the initial consonant and guesses at the rest of the word".
3. "Tries to break the word into syllables".
4. "Slowly sounds out the whole word".
5. "Tries to figure out the word from its configuration".

Similar questions may be asked for difficulties in arithmetic and written language. These responses lead to further questions, many of which can be answered by the teacher without the administration of standardized tests. Questions that teachers ask of themselves provide crucial evaluation data which become the basis for remediation. Once the academic problem is identified in general terms (i.e., difficulties in the analysis of unfamiliar words), careful observation may provide the answer to pertinent questions regarding more specific learning difficulties.

Informal Tests

In addition to the observational data obtained through daily interactions with the child, it is often necessary to administer informal teacher-made tests (Lerner, 1971). These specific task-oriented tests provide additional evaluative teaching data, many times exceeding the value of information obtained through more formalized testing procedures. Informal measures may be given by the teacher in the classroom or in the learning assistance centre.

Instruments that are included at this level of evaluation include: (a) seatwork exercises emphasizing **one** specific task, (b) orally administered exercises, (c) informal teaching lessons assessing various skills, and (d) individually administered written assignments. Teacher-made evaluative instruments are informal and designed to assess one particular skill (i.e., knowledge of a certain blend, knowledge of a specific letter sound, etc.). An illustration of an informal test evaluating the child's knowledge of the names of the letters of the alphabet follows:

INSTRUCTIONS: Prepare a worksheet with the alphabet in random order, as shown below. Ask the child to read the letters aloud to you. Note specific difficulties by circling the letters not known or writing in letters incorrectly called. Following the test, look for particular clues, such as reversals (e.g., "d" for "b") and inversions (e.g., "b" for "p").

f k z a u r i v g
b m j x s d h l y
o c w n e q t p

A number of alternatives to this informal test can be constructed by adapting the format to the particular skill to be evaluated. The instruments are not intended to be complicated, expensive, or time-consuming. They are teacher-made and teacher-administered, and the information obtained provides the teacher with data in planning for the specific needs of an individual student.

Formal Tests: In addition to observational data and informal testing procedures, teachers may need supportive data provided by standardized diagnostic tests. If formal testing is indicated there are a number of very comprehensive tests currently available for this purpose. However, formalized tests will often provide the teacher with little more than he already knows, particularly if informal procedures have been accurately administered. There is little reason to assume that most diagnostic tests need to be administered by someone other than the teacher. Because this level of evaluation is more likely to involve direct individual interaction with the child, teachers sometimes find it difficult to schedule the time for formal pupil assessment. Consequently, formal testing is often left to someone other than the teacher. However, the teacher should attempt to schedule the evaluation during a quiet time in the class, before or after school or during recess. The teacher should administer all aspects of the evaluation that are within his capabilities. Here the learning assistance teacher may help by substituting team teaching or giving the assessment in the classroom. The LAT may take the child to the learning assistance centre.

The selection of a standardized test involves careful planning on the part of the teacher. Prior to the actual selection, the teacher must decide what questions should be answered by the test. Questions should pertain specifically to the child's instructional needs. It is frustrating and a waste of time for both the teacher and the child to administer tests which provide little specific information. The standardized test that is selected should be based upon the unique aspects of each child's academic difficulties. If the chosen test is composed of a number of specific subtests, only those subtests that are necessary should be administered. Much time and energy could be saved if careful planning and analysis preceded the actual administration.

A final note involves the administration of more exacting tests that require expert of special interpretation and analysis. It may be necessary to obtain the services of a qualified examiner who is trained in the areas of personality or intelligence testing. When this type of service is warranted, the results of these tests should be viewed in conjunction with the data previously obtained by the teacher. Too often, the information accumulated by others is not used by the teacher because of the indirect implications for instructional programs. There should be closer coordination between informal teacher evaluations and formal test results. Individuals working together will be able to more accurately evaluate the specific instructional needs of children who have learning problems in school.

Remediation is likely to be successful only when it is based upon adequate evaluation of the child. Clearly, the best evaluation is ineffectual if the results are not used for planning instructional programs.

Utilizing All the Information: An important but often overlooked facet of evaluation is the information that clearly points to a child's strengths. What a child **can** do is as important in planning a program as what a child cannot do or does poorly. Learning strengths that are exhibited both in the classroom and in informal and formal tests will often provide the teacher with the basis for a teaching program.

Data obtained through both informal and formal evaluations serve as a guideline in planning remedial programs. Some of the information (e.g., knowledge that the child reverses letters) can be used directly in the teaching process. Other information (e.g., observation that the child learns motor skills quickly) will be used for total program planning. Wherever the evaluative data are utilized, they serve as a foundation upon which future successes can be built.

What Services Do I Program?

There is no one best instructional material or method for academic remediation. What will work to one child's advantage may possibly work to another's disadvantage. Learning assistance teachers should be able to handle any number of different learning problems by utilizing what will work for a particular child. Because there are individual differences in the way a child learns, there should be different approaches in helping children learn. A lack of flexibility in approaches is often one source of learning problems in children. This inflexibility is an inappropriate teaching method. Often a change in teaching procedure may be the key to successful learning. Wallace and Kauffman have outlined concerns in this area: "One of the challenges of teaching is adjusting to individual differences among normal children. Even more challenging are the differences presented by children experiencing difficulties in school. **Probably the most complex problem confronting the teacher is that of adjusting instruction to individual differences.** The ability to adjust instruction requires that teachers have a working knowledge of a wide variety of materials and techniques. Nothing is more convincing than to view a child reach academic success because of a change in instructional methods or materials.

Successful remediation is based upon teaching versatility. This is not considered to be an easy task. On the contrary, it requires detailed planning, conscientious study, and hard work. One difficult aspect of this process involves experimentation with differing methods and materials for particular children until a successful approach is found.

The teacher will also be frustrated during this stage. Some teachers hesitate to experiment with new teaching methods and materials for fear of another failure. When a particular approach is successful with a specific child, remediation is only a matter of conscientiously attending to the teaching task and continually reinforcing the child's success. The material or approach itself may serve as a reinforcer when teaching is highly successful.

It is difficult for some teachers to use more than one teaching method. It is equally difficult to convince the teacher of the merits of a specific approach for a particular child if the teacher is already convinced of the "advantages" of using a certain material with all children. Nevertheless, the teaching process is less frustrating when alternative approaches to instruction are used with specific children. For example, individuals who have experienced continual failure in learning how to read with a strong phonics emphasis will often achieve success with a more visually oriented approach. Frustration is lessened and learning is enhanced when the teacher is flexible in his approach to instruction.

Many teachers have found that a change of approach for one child will sometimes indicate a change of materials for other children in the class. Methods and materials selected for children with learning difficulties often may be utilized successfully with children who have not experienced severe learning problems."

The learning assistance teacher will need to consider methods and materials in organizing the direct services needed for a particular child.

What Do I Need to Provide Direct Services?

Many teachers are convinced that successful remediation is dependent upon the use of a variety of materials and methods. But it is often difficult to select materials and determine their effectiveness for particular learning problems. In their step by step process of remediation Wallace and Kauffman have outlined considerations in the selection of available materials.

> Successful remediation is often dependent upon the instructional material or approach that is used. The teacher should consider the following questions when selecting materials for specific children:
>
> 1. What are the child's strengths? Through which modalities does he seem to learn best?
> 2. What are the child's weaknesses? Through which sensory modalities does he seem to have the most difficulty?
> 3. Is the child immature for his age? Does he become frustrated easily? How long does he attend to a task?
> 4. What is the child's interest level? What are his special interests?
> 5. What methods and materials have been used in the past? Which have been successful and which have been unsuccessful?
> 6. Does the child have any physical handicaps that necessitate specialized equipment?[3]

Materials. Responses to the questions listed above may be obtained through informal and formal evaluations of the child. Decisions concerning which material or approach to use with individual children will be based upon responses to these questions.

If the child has already experienced success with a specific instructional material, it is probably wise to continue with its use. Children experiencing learning problems often have used materials not directly suited to their specific learning styles. Equally debilitating are the situations in which children have been switched from material to material without any consistency from year to year. It is always discouraging to examine such a child's cumulative folder. In addition to the thickness of the folder, one is always amazed by the number of different programs, approaches, and materials to which the child has been exposed. Changes in instructional materials were apparently of no avail, since the child continues to experience academic difficulties. Any number of reasons may have caused the continual difficulty, not the least of which may be the lack of appropriate planning for selection of instructional materials.

The process of determining which material to use with particular children should begin with the questions listed above. Patterns usually develop whereby certain types of materials or methods are eliminated because of specific difficulties. For example, a sight word approach to reading instruction would not be an effective choice for a child experiencing visual memory problems. Likewise, a child who has spent two years with the *Sullivan Programmed Readers* (Buchanan, 1968) with little academic improvement, may profit from using an alternative reading series.

Following an analysis of all available information (test results, informal observations, prior use of certain materials, and individual interests), the teacher should be able to list a number of alternative instructional approaches. Based upon individual teacher judgment, one approach should be chosen and implemented. No magical formula is available at this stage. A number of possible factors complicate the final material selection. The availability of certain materials, the financial status of the school district, administrative policies of the school district, and teacher preference are all factors which ultimately affect which material can and will be used with a particular child. Nonetheless, once all these factors have been considered, the final decision rests with each individual teacher.

The proliferation of commercially prepared instructional materials has added to the teacher's material-selection dilemma. The hard-sell and the creative packaging of materials has placed the teacher in the position of questioning the effectiveness of the materials he is presently using. Much can be said concerning the number of excellent materials currently available. On the other hand, volumes could be written about the hundreds of ineffective and poorly conceived materials. It is unfortunate that many advertising gimmicks have helped to sell basically inferior materials. Teachers must be aware of packaging and advertising deception and judge a material on its instrinsic value and appropriateness to their particular situation.

> The many outstanding newer materials that are finding their way into remedial programs should be both well received and widely used. Many of these materials have been expressly designed for children experiencing specific learning problems. There is an acute need for good materials, since children with learning problems often have failed to respond to programs designed to meet the instructional needs and characteristics of normal children. Specialized approaches and materials which are uniquely designed for handicapped children serve a very useful purpose in education. They provide the teacher with precise tools which help in remediating academic problems. The material that is matched to specific difficulties enables the teacher to spend additional time on other aspects of remediation.

When the learning assistance teacher has evaluated the student's needs and learning style and identified the materials that are appropriate, a plan for direct services is designed.

Many students may not need services outside their regular classroom if the learning assistance teacher consults with the classroom teacher and supplies and demonstrates the materials.

The learning assistance teacher may want to demonstrate the remediation process in the classroom or team teach with the classroom teacher until the new presentation is learned.

Another approach for the learning assistance teacher would be to take the student for a specified amount of time (i.e., one half hour a day for four weeks) with the expectation that the student, method and materials will be integrated into the classroom program.

The article by Vicente (1978) in this section delineates the role of learning assistance teachers and identifies a number of direct services. In addition, Parker's (1978) elementary learning assistance self-evaluation scale should be considered when looking at the many facets of the learning assistance teacher position. Parker's (1978) general list of suggestions for learning assistance teachers is also included.

McCarthy's (1970) material on Educational Planning based on Diagnosis is in this section. This material includes observable classroom behavior and group and individual teaching techniques.

Learning is a serious business but can be presented in an attractive package. Hudak's (1972) list of games and activities is included to provide attractive formats for special skill learning.

Reynolds and Birch (1977) tell the story of Chris Nassar in *A Person called Learning Disabled and Behavior Disordered*. This account carefully illustrates effective evaluation of a problem.

The Role of Elementary Learning Assistance Teacher and Public Relations

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Ann Vicente

The Province of British Columbia defines learning assistance as one of the types of services available for approval funding procedures from the Ministry of Education. These approvals are granted on the basis of one teacher for every 350 students enrolled in a system (K-11). For these calculations a kindergarten student enrolled in a half time program is counted as one (Guidelines, 1977-78).

After receiving approval from the Ministry, individual school districts hire teachers for these positions. The Ministry does make general recommendations on personnel and training but there are no provincial job descriptions, certification endorsements or required training. The three universities in British Columbia do not provide any undergraduate training or specific courses leading to an adequate preparation for learning assistance teachers.

Districts in British Columbia have evolved diversified in-service training programs, job descriptions and expectations for the people they have assigned to the position of elementary learning assistance teacher (LAT).

What is the role of elementary LAT?

The LAT is assigned to an elementary school at the ratio of 1:350 students and charged with assisting any child in this population who has learning problems.

Problem areas include:

- remedial reading
- remedial arithmetic
- language development
- visual
- motor
- perceptual
- hearing impairment
- visual impairment
- behavioral
- emotional
- need for enrichment
- and many others in all subject areas

In addition the LAT is perceived as an intraschool and an interschool resource person in the district. The LAT may also fill the role of child advocate with other community resources.

At the present time in British Columbia each teacher, principal coordinator, superintendent and parent sees the LAT in a separate light. Perkins (1977) studies in Terrace, Smithers and Kitimat indicated that there are situations in a single school where the LAT and the principal do not have the same perception of the learning assistance program in their school. This can lead to unrealistic expectations and disappointments for both.

The learning assistance services can be placed in three general categories: **assessment and diagnosis, direct services,** and **consultation.** There will always be some overlap but these divisions will allow the teacher to classify services and identify priorities.

Assessment and Diagnosis

How does the LAT get students? Someone thinks something is wrong and the LAT will need to assess the problem, make a diagnosis and prescribe a program to alleviate the problem.

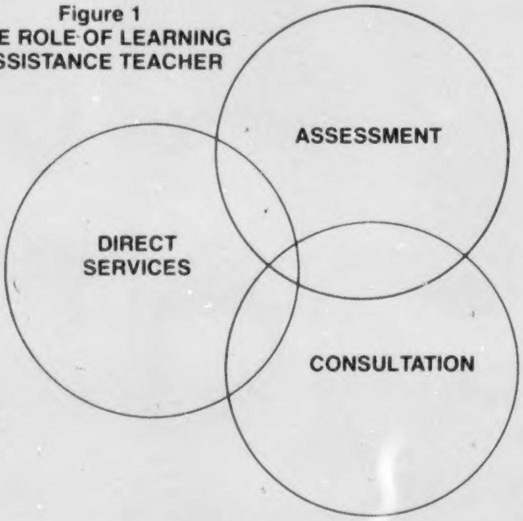
The first LAT in-service programs in British Columbia emphasized testing skills. In some sessions 60% of the time was spent in learning how to administer and score published tests. Because many LATs attending in-service had no formal training (Csapo, 1975), these assessment procedures became a large part of their program. They had not been reinforced to accept the assessment of a strong experienced teacher or their own observational skills. Accountability expected formal pre and post testing. Not enough emphasis was placed on the evaluation of classroom production and informal specific skill testing.

Each LAT should have an inventory of tests that can be given when a specific problem is indicated but the LAT should also have evolved a system for observing students and collecting observations from teachers and parents. Records should be kept of observations and they can serve as pre and post tests as can work samples.

Most schools have group testing programs. The LAT should be involved in this process to understand the reliability and validity of the scores recorded. These scores provide a great deal of information about the students' production in a group situation. Group scores, in addition, will provide the problem student's class rank and give additional insight into the severity of the problem. The LAT should be encouraged to look carefully into student records for previous reports, information and testing. There may be sufficient information to indicate the area of observation and work sample collection without additional formal testing.

When the LAT has observed, collected others' observations and work samples and researched records, previous group and individual test results and not found sufficient information for programming the individual testing procedure should be considered. Many good tests are available. Reliability and validity should be kept constant by following directions and no test should be given without a definite indication of how the results will be used.

Figure 1
THE ROLE OF LEARNING ASSISTANCE TEACHER



Direct Services

Once the assessment procedure has been followed the LAT makes a diagnosis of specific problems and suggests means of assistance. The most important part of this procedure is to realistically look at the amount of learning assistance time available and the services needed. The LAT should identify internal and external resources available in personnel, materials and time so that alternatives to LAT direct services can be considered. Direct services include:

Counselling:
The LAT may find time well used in counselling students and parents on behavior or home problems. Often classroom teachers will respond to teaching a program suggested by the LAT and the LAT can use smaller amounts of time to provide direct services to the student if counselling on attitude and commitment has been done. Here too, the LAT should be aware of the internal and external counselling resources. Teachers, school psychologists, principals, public health nurses, social workers, ministers and community volunteer agencies may provide services that are appropriate for school children with problems.

Small Group Teaching:
The remedial reading model of direct services includes small homogeneous groups of children who receive intensive drill work on specific skills. This type of organization can be appropriate for any subject area where a small group has been identified. Teaching these groups in a classroom rather than an isolated setting can give classroom teachers an opportunity to observe techniques. Often the LAT can indicate a time limit for service (6 weeks, 2 months, etc.) with the expectation that at the end of that time children should return to class groups or the classroom teacher may be able to take over the group for instruction.

Small group instruction is particularly effective with children who need reading readiness skills. The Ministry has placed emphasis on the LAT's responsibility to identify and remediate as early in the school experience as possible. This emphasis on early identification and prevention will give the LAT tasks in language development, visual motor skills and conceptualization.

Learning assistance does encompass the bright student as well as the remedial student. Small group instruction for enrichment can be rewarding for students and teacher. These projects can be designed to call upon the skills of principals, librarians, specialist teachers, and community resources as well.

Individual Teaching:
In each elementary school setting the LAT will find students whose learning problems are so unique they must be taught on a one to one basis with the LAT. It may be a specific subject area deficit, a need for enrichment, tutoring in self care or social skills but the LAT must block out an individual time schedule. This too should have some time limit and other resources should be identified if the problem is long term. It is in this area that teacher aides, peer tutoring and child care workers have been used very effectively.

Consultation

The consultative area creates more problems for LATs. There is less training in this area. Because many LATs do not have formal training they do not have confidence in their own experience and ability and are unsure of themselves as consultants in or out of the school. It is important that they move towards this role because schools and teachers are becoming more sophisticated in identifying problems and the LAT does not have sufficient time to provide direct services for all students in need. The LAT should serve as a consultant to:

Students — Helping students with programs and materials.

Teachers — Working with teachers to evaluate programs and materials, to make referrals for additional help, to demonstrate techniques and provide intraschool in-service.

Principal — To provide input on student placement, suggest purchase of materials, and help with beginning teachers.

Parents — To help with parent education programs, demonstrate materials, and provide guidelines for behavior counselling.

District Personnel — To provide information for transfers, gather records to recommend use of other district resources, and share materials and techniques.

Other Professionals — Making sure there is a positive flow of information among teachers, psychologists, family counsellors, speech therapists, doctors, nurses, and social workers.

Why Public Relations?

The role of learning assistance teacher becomes more sophisticated each year. The proliferation of materials both in assessment and teaching makes the choices difficult, but the greatest problem is best use of time. It is important for the LAT to plan the most effective use of time. Priorities should be set in each area. In assessment the LAT must design a referral system that makes use of known information, observation and careful testing. The LAT must look carefully at all of the identified needs, be flexible about new unexpected problems and arrange direct services time to provide maximum help. Emphasis must be placed on taking more time for the consultative role. This will help other teachers gain confidence in their ability to respond to problems, keep all those interested in the children informed, and provide effective use of resources.

Many professionals have very little idea of what the learning assistance teacher does in an elementary school. Where the services are provided in a self-contained setting even fellow teachers and the principal may not understand the role. To provide maximum service and information each LAT should plan a program of public relations to explain the role to fellow workers, students, parents, the community and district personnel. Keeping others informed will provide maximum support. Many LATs in British Columbia have used good public relations to enhance attitudes toward the service in the elementary setting. Public Relations should be used with principals, teachers, parents and students.

The LAT role must evolve to fit the needs of a particular school. The LAT should inform the principal and teachers of specific skills, strengths and materials available. The staff should be aware of time available and help establish school priorities. During the year the LAT should have periodically scheduled time with the principal (at least once a month) to go over children in the learning assistance program. A single sheet with all names and a single comment can be left with the principal who will use the information for parent or district calls or conferences. A procedure like this will make the principal and LAT aware of the progress of individual students and serve as a crosscheck on use of time and school priorities.

As LATs move out of the self-contained setting into classrooms and consulting the "mystery of what they do" disappears. Techniques and materials can be shared with fellow teachers. A check out system for learning assistance materials can give many teachers new ideas. These materials can be demonstrated at a staff meeting or in a classroom with children. Some assessment tests were designed for classroom teacher use. The LAT might want to demonstrate their use and teach a class while the teacher uses a test to pinpoint difficulties.

It is imperative to the success of a learning assistance program that parents are informed at all times. They should know why their child is receiving learning assistance, what it is hoped will be accomplished and for how long. Few parents are totally unaware of their child's problems. Most will welcome help and understand that educators might not be able to solve the problem but they can try with different materials and techniques. Supportive parents are an asset to any program.

If a learning assistance program is to be a positive service in an elementary school all students should be aware of what the LAT does. The LAT needs to be part of the staff with exposure to all students in and out of the classroom. Here the LAT might want to help with group testing, teach a special lesson to a class, demonstrate materials to groups or ask students to help as peer tutors or aides for younger or new students. Fostering a positive attitude within the school will make the assignment of a student to the LAT for assessment, direct services or consultative help a good experience and not be perceived as failure.

When the learning assistance student is receiving help the LAT should spend time explaining why the student is there. Discussing alternatives for help may give the LAT insight into the student's strengths, expectations and self concept. Many students have benefited from charting their own progress.

Keeping all people involved informed about the learning assistance program is a big job but it pays off in support and the evolvement of a positive role for the LAT in an elementary school.

In special education no one has the answer (if they did they'd be basking on millions in the sunshine), but as we pursue more information through reading, conferences, in-service courses and observations we have a larger repertoire of alternatives.

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Elementary Learning Assistance Self-Evaluation Scales

by Richard Parker, School District #88

A. Immediately observable features of learning process:

1. Motivational approaches:
Specific measures are taken to encourage and motivate students, including: self-checking and graphing, display of work results, offering rewards or incentives, positive competition, close home-school information exchange.

Insufficient measures taken for student motivation.

1 2 3 4 5

2. Instructional Strategies:
Instructional approaches reflect known principles of learning: massed and spaced practise; over-learning; fluency and timed practice pacing; initiating and fading cues; active student involvement; concrete → abstract; simple → complex; goal directing students, etc.

No clear reflection of known principles of learning in teaching.

1 2 3 4 5

3. Social relations among students:
Relations among students in L.A. sessions is co-operative, positive; good group cohesion.

Students tear down one another.

1 2 3 4 5

4. Task orientation of students:
Students spend great majority of L.A. time working on assigned tasks

Students attend to tasks or not, as they please. Little actual work accomplished.

1 2 3 4 5

5. Student-Teacher interaction:
Interaction is positive, showing mutual respect, trust, and rapport. Student accepts guidance, direction, and discipline from teacher. Interaction is relaxed, firm, warm.

Interaction is negative; not productive to good working relationship. Mutual respect not apparent. Student self-concept unlikely to thrive.

1 2 3 4 5

6. Instructional Style:
Instructional style varied to meet needs of different students. Generally, shows enthusiasm, confidence, and actively involves student, both emotionally and in problem-solving.

Style dull, cold, hesitant, or disregards student reactions.

1 2 3 4 5

7. Method of Lesson presentation:
Varied methods of lesson presentation include: oral drill, board work, seat work, work with "partners", games, etc.

Method of lesson presentation unvaried and monotonous.

1 2 3 4 5

8. Quality of student work:
Students appear to be interested in L.A.T. lessons, concerned about progress, and trying hard consistently.

Quality of student work poor or uneven due to attitude or inadequate instruction.

1 2 3 4 5

9. Lesson format or sequence:
Lessons have appropriate review, introduction, pre-teaching, and conclusions (where applicable).

Lessons lack coherence and sequence.

1 2 3 4 5

10. Behavior/emotional problems:
Behavior/emotional problems are handled calmly, objectively, sympathetically, and effectively.

Behavior/emotional problems are mishandled.

1 2 3 4 5

11. Active Supervision:
Students are always closely supervised and given sufficient direction, instruction, and assistance.

Students lack benefit of active supervision.

1 2 3 4 5

12. Error feedback:
Student receives immediate feedback and reinforcement on whether response is correct or not, as well as indications of what type of error and how the error could be corrected in future.

Lack of immediate feedback and corrective teaching on student errors.

1 2 3 4 5

13. Lesson Pace:
Lesson is well paced (neither too fast or slow).

Poor or irregular lesson pacing.

1 2 3 4 5

14. Physical Area:
Physical area is well equipped to allow flexibility in types of lessons, types and sizes of groups. Privacy is ensured when needed. Chairs and tables are proper height. Materials are neatly stored and easily accessible. Materials are varied and supply is adequate.

Physical area is distracting, unpleasant, or otherwise does not contribute to efficient work. Materials supply inadequate.

1 2 3 4 5

B. L.A. Program features observable over time within the learning process:

1. Individualization:
Accommodation is made for different skill levels or abilities (e.g. rate of learning new content) between individuals in a small group L.A. session.

No accommodation is made for different skills or abilities within a group. All are treated the same.

1 2 3 4 5

2. Unique opportunity:
Students in L.A. session are doing what they could not do as efficiently or as successfully in home classrooms with regular classroom teacher.

Students could function and learn as well in regular class through regular instruction. L.A. session does not give unique opportunity.

1 2 3 4 5

3. Innovation:
L.A.T. is innovative in creating own lessons, materials, games, presentation formats, etc. besides what is available in pre-packaged published form.

Only uses "canned" materials and procedures. No innovation.

1 2 3 4 5

4. Grouping for Instruction:

Grouping is efficient, considers social skills and interaction as well as skill functioning.

No grouping or grouping does not work well due to failure to consider academic and social skills.

1 2 3 4 5

5. Completed Student work:

Students, parents, and classroom teacher receive rapid feedback on completed work. Work is displayed attractively.

No feedback to student on completed work or feedback is too delayed.

1 2 3 4 5

C. L.A. Program features observable in records, lesson plans, student files, L.A.T. interview, etc.:

1. Teaching/Tutoring toward long term goals:

Goal directed, goals clearly articulated and pursued.

No goals or consistent direction.

1 2 3 4 5

2. Teaching/Tutoring toward short and medium term objectives:

Objectives identified, prioritized and translated into instructional terms. Objectives guide teaching.

Lack of short and medium term objectives, or not clearly set. Teaching not guided by priorly set objectives.

1 2 3 4 5

3. Periodic evaluation of effects of instruction on student performance:

Regularly takes inventory of increases in student skill. Assessments guide changes in instruction.

Lack of assessments, tests, or inventories **or** results from these measures do not guide instruction.

1 2 3 4 5

4. Formal Testing:

Formal testing only follows personal meeting with teacher, discussion with student, examining work samples, observation in class, and clearly setting out purpose of testing, e.g. "What instructional use can be made of the test results?"

Formal testing is done by habit or is done automatically upon request without a clear rationale and instructional goal.

1 2 3 4 5

5. Lesson Planning:

Lesson Planning (long and short term) is sufficiently detailed that outsider can understand goals and objectives, and instructional strategies.

Lesson planning lacking; does not give outsider a clear idea of objectives pursued or instructional approaches.

1 2 3 4 5

6. Record Keeping:

Regular anecdotal comments and objective data written in a record book immediately following L.A. session. Recorded notes reviewed prior to next session.

No immediate notes kept on student performance or behavior. Lack of records impede lesson planning.

1 2 3 4 5

7. Weekly and daily time schedule:

L.A. time schedule for individuals, groups, and classes is clearly set out, publicized in school, understood. Procedures ironed out to ensure that schedule is kept by students and fellow teachers.

Schedule not understood or publicized. Schedule not taken seriously by students or fellow teachers.

1 2 3 4 5

8. Student skill awareness:

L.A.T. is fully aware, in detail, of what skills student has and does not have, in critical school task areas.

L.A.T. seems unaware of where student is functioning in terms of critical school-related skills.

1 2 3 4 5

9. Recommendations to regular classroom teacher:

Recommendations are based on awareness of child's regular class materials, classroom grouping, progress, timetable, etc.

Recommendation to regular class teachers largely ignore what is going on in regular class.

1 2 3 4 5

10. Scheduled free time:

Any time-tabled free time (without students) is used wisely and efficiently for preparation, consultation, observation, etc.

Any free time becomes a coffee break.

1 2 3 4 5

D. Relationship between Total school program and L.A. program:

1. Communication between L.A.T. and regular classroom teacher:

Regular two way information exchange on student progress, problems, social/emotional difficulties, and need for follow-up and reinforcement.

Little communication. Two programs are separate.

1 2 3 4 5

2. Relationship of L.A. program to total school philosophy and priorities:

From priorities and philosophy of total school, L.A. program structure derives Input from principal and fellow teachers in establishing and modifying L.A. program. L.A. program integral to school.

L.A. program is "tacked on" to broader school program; independent of broader school priorities and concerns.

1 2 3 4 5

3. Selection of students for L.A. Program:

Selection according to consistent criteria, which include features of the total classroom or in-class group, as well as student alone.

Student selection for L.A.T. instruction is haphazard; does not reflect consistent criteria.

1 2 3 4 5

4. Involvement of parents:

Parents notified of and kept aware of progress in their child's L.A. sessions. Their advice is sought.

Parents not informed of or involved in L.A. sessions.

1 2 3 4 5

5. Skill transfer to regular class:

Periodically seeks feedback on whether new skill development in L.A. session is transferring to regular class performance. This feedback is used to modify L.A. teaching.

Skill transfer is not monitored or, if it is, the information obtained is not used to help modify L.A. teaching.

1 2 3 4 5

6. Basis of dropping students from Learning Assistance:

Basis is largely upon greater ability of the child to find success in the regular classroom, due to:

- a) his skill or self-concept
- b) change in instructional materials,
- c) change in regular teacher's practices.

No sound basis for terminating students from Learning Assistance.

1 2 3 4 5

7. Timetabling students:

Timetabling of students by L.A.T. considers other subject areas and activities the student is involved in.

Timetabling of students done with little regard for other activity periods in school.

1 2 3 4 5

E. Professional, Personal, and Interpersonal Skills and Knowledge:

1. Relationship between L.A.T. and classroom teachers:

Relationships co-operative, supportive, pleasant, L.A.T. is general resource person for questions in Special Education or Remedial Education instruction. L.A.T. is morale booster

L.A.T. not a general school resource. Staff relationships poor.

1 2 3 4 5

2. Professional relationship between L.A.T. and School Principal:

L.A.T. accepting and respectful; profits from suggestions.

Poor professional relationship.

1 2 3 4 5

3. Knowledge of basic academic skills, subskills, and sequences or hierarchies of teaching tasks:

Good knowledge of teaching content and component skills in basic skill areas of: Reading, Spelling, Math, Handwriting, Language and Vocabulary. Knowledge shown in instruction.

Lack of understanding of basic academic skills and subskills.

1 2 3 4 5

4. Knowledge of child development, and developmental readiness:

Instruction reflects understanding of main developmental milestones and age appropriate tasks. Social/Emotional, perceptual, speech and language, and motor readiness all considered (in Grades K-2 especially).

Instruction does not show awareness of role of development in teaching/learning.

1 2 3 4 5

5. Knowledge of regular B.C. curriculum goals, objectives, and basal materials:

Good working knowledge of all Grade levels of B.C. curriculum within a broad Grade range

Not familiar with curriculum goals or prescribed materials.

1 2 3 4 5

Elementary Learning Assistance

Some Suggestions

Richard Parker

1. The L.A. program should be consistent with the philosophy of the school principal.
2. Priorities for the L.A. program should be set by regular classroom teachers.
3. There is no one best form or type of L.A. program; rather there are a variety of successful models. The successful program grows out of the particulars of each school (strenghts of regular teaching staff, philosophy of principal, the community which the school draws its students from, etc.).
4. The work of the L.A. teacher is almost always toward these goals:
   - (a) To improve the achievement of the child in the regular classroom.
   - (b) To improve the child's concept of himself as a member of the classroom grouping.
   - (c) To improve the interaction between child and regular classroom teacher and between the child and his classmates.
   - (d) To improve the lesson-planning and presentation by the regular classroom teacher for the child.
5. The L.A. teacher should rarely make recommendations to the regular classroom teacher on teaching particular children until the L.A. teacher has observed the child operating in the classroom setting.

6. Recommendations from the L.A. teacher to the regular classroom teacher should be **demonstrated** by the L.A. teacher **within** the regular classroom whenever possible.

7. Materials chosen or recommended by the L.A. teacher for use with problem learners should be related as closely as possible to what is being used by the classroom teacher.

8. When the L.A. teacher and regular classroom teacher are both working separately, on a regular basis, with one child or a group of children, daily exchanges of information should occur on the child(ren)'s progress and what the lesson or tasks consisted of.

9. It is the responsibility of the L.A. teacher to become familiar with the curriculum guides and the B.C. prescribed texts used by those regular classroom teachers with whom or in whose classrooms the L.A. teacher is working.

10. It is the responsibility of the L.A. teacher to become thoroughly familiar, early in the school year, with the individual classrooms which the L.A. teacher will be working with/in. This includes familiarity with:
    - (a) The basal and supplementary materials selected by the regular classroom teacher.
    - (b) The grouping(s) of students formed by the teacher.
    - (c) The amount and type of social interaction which occurs in the classroom among students and between students and teacher. Whether it is encouraged or permitted by the teacher.
    - (d) The classroom discipline maintained by the teacher.
    - (e) The "teaching styles" or approaches used by the teacher in presenting lessons.
    - (f) The amount of seat work, project work, oral work, board work, activity or interest centre work, etc.
    - (g) The daily and weekly scheduling of activities in the classroom (standard from week to week, or flexible?)
    - (h) The separateness or integration of the basic subject areas:
      (1) Language Arts (listening & speaking, composition, spelling, reading, handwriting); (2) Mathematics; (3) Science; (4) Socials; (5) Arts; (6) Music; (7) Phys. Ed.
      If there is quite a division between these areas, which are emphasized?

    Becoming familiar with these aspects of the regular classroom is not for the purpose of evaluation or criticism, but simply to ensure that the work by the L.A. teacher and the recommendations from him/her will **complement** rather than **clash with** the broader instructional program in the regular classroom.

11. If the home situation plays a major part in a child's difficulties at school, and there appears to be a good chance of remedying the home situation, the L.A. teacher should take the initiative in contacting and working with the home.
    N.B. This role is, of course, delicate, and prior to any extensive involvement with a home, the following conditions should be met:
    - (a) The involvement must be approved by the school principal.
    - (b) The regular classroom teacher should be also involved as much as he/she wishes.
    - (c) The L.A. teacher should have the personal/professional skills for this role.

12. Before formally testing for him/herself or for a regular classroom teacher, the L.A. teacher must ask:
    "What educational decisions will I be able to make with these results which cannot be made now?
    Will my choice or range of options (of instructional materials or strategies) increase as a result of the testing?
    Will the test results tell me what and how to teach?"
    If there is no satisfactory answer to these questions, the L.A. teacher should not engage in formal testing.

13. In most cases, formal testing (especially individual formal testing) should be preceded by:
    - (a) Person-to-person discussion with the regular classroom teacher.
    - (b) Collection of work samples of the child.
    - (c) Informal observation of the child working in the natural learning environment (the regular classroom).
    - (d) Assisting the child individually or within his group in his assigned task (in the regular classroom, if possible).
    - (e) Trial teaching **and discussion** with the child over his errors.

Record Keeping and Data Collection in Learning Assistance Programs

A. Why Do It?

1. To provide the classroom teacher and L.A. teacher with useful information in their conferences and correspondence with parents.

2. To increase the communication of specific and useful information between the L.A. teacher and his/her fellow teachers in the school.

3. To provide the school principal with program information which would allow him/her to:
    - (a) Speak accurately with parents re: the progress of their children in the L.A. program and in school in general.
    - (b) Evaluate the effectiveness and efficiency of the school's L.A. program.
    - (c) Evaluate the effectiveness and efficiency of the L.A. teacher's performance in his/her professional role.

4. To provide the Supervisor of Special Services with information necessary to monitor the type of L.A. program evolving in a particular school, and its effectiveness within the school.
    This information may serve as a basis for:
    - (a) Consultation and recommendations with school principals.
    - (b) Directing changes in Special Services policy throughout the school district.
    - (c) Forwarding documentation in support of program growth or change to the School Board and/or the Ministry of Education, Science and Technology in Victoria.

B. What Kinds of Record Keeping and Data Collection?

(for in-school distribution)

1. Every L.A. teacher should regularly copy and circulate an up-to-date time schedule, outlining use of time and activities on a daily and weekly basis.

(for in-school distribution)

2. A standard day-book with lesson plans complete enough to be carried out by an otherwise uninformed substitute should be kept by each L.A. teacher.

(for in-school distribution)

3. Anecdotal records should be kept on a daily basis, per child, group, or time block (a spiral or loose-leaf binder recommended).

(for in-school & home distribution)

4. School reports should be prepared for the regular reporting periods (thrice yearly), including an overview of the activities of the L.A. teacher with the particular student and the student's progress in those activities. Student assessments will also be recorded here.

(for distribution to school principal and supervisor special services)

5. An overview and summary of the operation of the L.A. programme within the school will be prepared twice yearly (before the Christmas holidays and in the month of June) on a standard, prepared form. (a copy accompanies)

Educational Planning Based on Diagnosis

Psychoeducational Diagnosis — A Derivative of Classroom Behavior

Jeanne McRae McCarthy, Ph.D.

The following material is an example of educational planning based on diagnosis.

Dr. McCarthy says the following about this material:

"The main thesis of this particular presentation recognizes the fact that most teachers do not have adequate diagnostic service available to them and that they must then play the role of the diagnostician in the absence of more adequate diagnostic help. I have taken issue with some of the authorities who feel that the teacher should teach and not diagnose, since I feel that each time a teacher decides that one method is not working, and reaches for another piece of material, she has in fact become involved in the ongoing diagnosis of the problem.

"In order to gather the data for the observable classroom behaviors, I went through a great many cases that had been referred to our diagnostic center in Schaumburg, tested completely by the psychologist and the psycho-educational diagnostician, and a tentative diagnostic hypothesis reached. As I sorted folders with similar hypotheses into piles, I became aware of the fact that teachers saw similar behaviors in children who were diagnosed as having similar kinds of learning problems. In this way I assembled the behaviors that could be observed in children who had been diagnosed as having particular kinds of learning problems, and also collated some of the recommendations made for programming these children, either in a group situation, or in an individual teaching situation.

"I hope that this piece of material is received by your teachers as an adjunct to their own creativity and ability to improvise and individualize instruction to suit the particular problems they are aware of in their children."

This material is being reprinted with Dr. McCarthy's permission.

Type of Disability	**Observable Classroom Behavior**	**Teaching Techniques**	
		Group	**Individual**
Visual — Motor Channel Disability (Auditory Learner)	"Strauss Syndrome" child		
	Reversals of b, d, p, q, u, n, when writing beyond C.A. 7 or 8.	Phonetic method of reading.	Exercises to train visual-motor abilities.
		Encourage oral responses.	Train visual discrimination.
	Inversion of numbers when writing (17=71), as well as reversals.	Utilize stimulus-reduction to reduce hyperactivity.	Train laterality.
			Train body-image.
	Mixed Laterality.	Color cues to reduce perseveration.	Use Ray Barsch's Movigenic Curriculum. (Barsch, R. Special Child Publication, Seattle.)
	Awkward motorically, frequently tripping over own feet, bumping into things.	Book marker to block out all but one line to reduce distractability.	
	Poor motor co-ordination.	Tape record lessons whenever possible.	Use Kephart's techniques. *The Slow Learner in the Classroom.*
	Hyperactive, short attention span, perseveration.	Present material on records, permitting oral answers.	
	Can give correct answers when teacher reads a test to him, but will not sit down and put them on paper.		Use Language Master or tape recorder extensively.
		Give tests orally, with teacher writing answers.	

	Poor handwriting, artwork, drawing. Poor performance on group tests of intelligence or achievement. Seems brighter than tests show him to be. Poor perception of time and space. Gets lost easily. Can't tell time. May have vision problems.	Strauss — Lehtinen: *Psychopathology and Education of The Brain-Injured Child.*	Tape record homework answers and type child's responses.
Auditory-Vocal Channel Disability (Visual Learner)	May have a speech problem. May sequence sounds or syllables oddly. May use "small words" incorrectly. Seems not to listen or understand. May watch teachers face intently, trying to lip read. May seem shy, rarely talks in class. Responds in one word sentences. Can follow instructions better after he has been shown rather than told. Cannot learn rote — memory tasks such as alphabet, number combinations, telephone number, address. Seems to be less intelligent than I.Q. tests indicate. Can "do" many more things than teacher would expect, i.e. fix electrical cords, put puzzles together, figure on abacus, etc.	Look-Say Method. Sight words. Flash cards. Configurational Clues. Context Clues	Teach auditory discrimination. Teach sound blending. Introduce phonics using Gillingham Method. Uses exercises to train all five auditory-vocal channel abilities.
Auditory-Vocal-Automatic Disability (Does not learn automatically from hearing language structure over and over.)	Mispronounces words commonly used. Does not use correct plural endings for such words as mouse, man, etc. Does not use correct verb endings for past and progressive tenses. Makes grammatical or syntactical errors which do not reflect those of his parents. May have related automatic disabilities in concepts of time and space, or in sound-blending.	Encourage imitation of teacher's phrases. Provide records to memorize (short poem). Provide visual cues whenever possible. Check sound-blending abilities before pressing phonics. Work on sight vocabulary. Check visual closure abilities.	Choral reading or speaking. Direct repetition of proper syntax. Language Master. Hegge-Kirk-Kirk. Remedial Reading Drills. Use incomplete sentences.
Decoding Process Disability (Does not understand the significance of what is seen and heard.)	Does not understand what he hears Poor receptive vocabulary. Cannot carry-out directions. Cannot identify sounds correctly.	Use short, one concept phrases. Ask short questions. Use experience charts in reading. Give visual clue whenever possible, i.e. gestures, written material etc. Use visual aids whenever possible.	Train listening skills. Increase vocabulary. Give increasingly more difficult oral instructions and problems. Write from dictation. "Simon Says" kinds of games.

Visual	Does not enjoy pictures or books. Does not understand what he reads. Cannot describe what is happening in a picture. May only be able to label objects. Cannot categorize pictures.	Allow child to auditorize whenever possible. Use phonic method of reading. Check comprehension carefully, giving auditory clues. Permit child to use records, tape-recorder, or other method of auditorizing material to be learned.	Train ability to label, describe, using simple pictures or objects. Use simple visual aids for practice. Identify colors, letters, numbers, etc.
Association Process Disability (Does not manipulate linguistic symbols internally.) (Does not relate what is seen and heard to what has been stored.) Auditory-Vocal-Association	Low score on Similarities Subtest of WISC. Poor concept formation in verbal responses. Has problems with abstract reasoning. Thinking quite concrete. Will raise his hand but give a foolish answer. Is very slow to respond. Needs time to mull over a question. Does not comprehend directions. Has never enjoyed being read to.	Ask one concept questions, eliciting several short answers. Accept concrete answers. Supplying more abstract for him. Provide visual cue where possible. Give ample time for response. Give child a written question to think about before answering.	Train his ability to find common characteristics. Practice finding differences or similarities. Categorize or classify objects. Identify incongruities in stories. Use Continental Press materials given auditorily.
Visual-Motor-Association	Cannot handle primary work-book tasks. Concept formation poor on standardized tests. Does not comprehend what he reads. Cannot tell a story from pictures. All he can do is label objects in the picture.	Permit him to trace correct responses first. Provide an auditory cue.	Train the ability to classify. Sort objects, pictures by use, shape, size, color. Incongruities in Pictures.
Sequencing Disability (Cannot remember sequences of non-meaningful stimuli.) Auditory-Vocal-Sequencing	Can't remember what he hears. Doesn't know alphabet by heart. Can't count. Can't memorize multiplication tables. May not be able to memorize First Communion prayers or hymns. May not know his address, telephone number. Can't remember instructions.	Permit child to use visual cues. Have him write as he memorizes. Use short, one concept sentences. Use visual aids.	Memory training exercises. Teach words in series. Have child learn simple finger-plays. Language Master Programs. Repeat sentences Verbatim.
Visual Motor-Sequencing	May misspell even own name after adequate practice. Can't write alphabet, numbers, addition and subtraction facts, or multiplication tables. May recognize a word one day and not the next.	Permit child to use an auditory cue. Permit him to trace when possible. Use audio-visual aids whenever possible. Flash cards to be traced.	Copy sequences of beads, blocks, etc. Reproduce patterns. Solve mazes. Join dots to make patterns. Teach typing.

Encoding Process Disability (Does not express ideas in words or gestures.) Vocal Encoding	Shy, seldom talks in class. Responds with one-word answers. May talk a lot, but expresses few ideas.	Provide opportunity and time for oral responses. "Show and Tell" may require much help from teacher. Give visual cue to help child describe events. Encourage oral reports, but with use of notes permitted.	Practice speaking in sentences. Give definitions. Discussions. Ask child to describe motor acts. Encourage imitation of tutor's speech.
Motor Encoding	Poor motor co-ordination. Poor at "Simon Says" when words are omitted. Has trouble imitating other children in games. Poor at "Charade" — type games. Seldom communicates with gestures. Handwriting, drawing is very poor.		Trace as much as possible. Encourage child to draw. Imitate teachers movements. Charades. Teach child to button, zip, tie. Kephart's exercises. Barsch's program. Physical education. Imitate tutor's actions.

Games and Activities for the Development of Learning Skills

By John Hudak, Special Counsellor, Burnaby

A. SUGGESTED ACTIVITIES EMPHASIZING BASIC MOTOR SKILLS

	Activities	**Materials**
Awareness of Self	Use "touch board" to emphasize awareness of tactile sense (i.e. rough, smooth, thick, thin). March like wooden soldiers with bells on legs or arms for accent. Encourage awareness of the feeling in muscles when reaching. "Angels-in-the-Snow"; Mirror activities Simon Says with body parts; Singing games — Looby Loo	Mirrors — Dolls Puppets, scarves Bells, "Touch Board" or Box Finger paints Clay, sand, water
Gross Motor Control	Walk, jump, hop, etc. to music Copy body movements; imitate animals or other actions. Stepping stones; obstacle course "Angels-in-the-Snow"; Walking Board; Balance Board Games — "Mother May I?" "Red Light" Balance using broomstick; Carry weights on arms or legs	Records Walking Board Stepping stones — Tiles Large inner tube Balls of assorted sizes
Fine Motor Control	Finger games with songs and rhymes String beads, Model with clay Construct simple designs on peg boards Construct 3-dimensional objects — (Flexagons, Tinker Toys, D-Stix) Trace — around patterns and within stencils Color on outlines and within lines; Use scissors	Lacing cards; Clay, peg boards, Beads, scissors Peg Boards, D-Stix Flexagons, Tinker Toys, Primary (fat) crayons, Stencils Bold outline coloring books

Orientation in Space	Use identifying marks for left and right hands and feet Put together nesting boxes or trees of colored rings, etc. Play catch and throw bean bags at targets Follow the leader; obstacle course; "stepping stones" Circle games — "Squirrels in Nests", "Three Deep", Relay races; — Hide and Seek, "I Spy"	Nesting boxes, Trees of rings Bean bags Puzzles Parquetry blocks
Eye-Motor Control	Watch ball on string (small, near target) like tether ball Chalk board games — tag, Lazy 8's, Streets and Alleys Marble games — Stadium checkers, Skeetball types Dot-to-dot pictures, coloring books, mazes	Small ball on string Chalk board Marbles Coloring books, dot-to-dot books Puzzle books, pencil

B. SUGGESTED ACTIVITIES EMPHASIZING BASIC AUDITORY SKILLS

	Activities	**Materials**
Attention	Responds to various signals for careful attention (bell, whistle, snapping) Follows simple directions, increasing in complexity Use selected songs and stories to have children respond to words with actions — "Old MacDonald Had a Farm", "Old King Cole" Games — Musical chairs, "Fruit Basket" (also done with animal sounds)	Various bells, whistles, etc. Story books Records
Listening	Imitate sounds and sound patterns Hear and respond to rhythmic beating Match different body motions to different tempos Respond with word or noise to key words: "She'll be Coming Round the Mountain", "Simon Says" with auditory clues Identify animals and objects from noises they make	Drums, Tambourines, etc. Selected records for rhythm Rhythm band instruments Animal sounds records, etc.
Discrimination	Differentiates between high/low, soft/loud sounds Differentiates rhythm patterns and accents Finds pictures with certain beginning sounds, etc. Learns sounds of letters; Selects which pictures go with which sound "Who is knocking at my door?"	Set of colored bells Picture of similar-sounding objects Picture-Alphabet cards
Imitation and Articulation	Learns alphabet song, days of the week, etc. Rote counting Memorizing poetry, blending sounds, tongue-twister exercises Retelling favorite stories with expression Find rhyming words, Work on tongue placement and control	Peabody Language Development Kit Mother Goose Rhymes Books of simple poems Speech correction books Mirror, puppets
Comprehension and Memory	"Show and Tell"; Relate experiences; Retell stories from memory Listen to stories, answer key questions Mark pictures from verbal clues or directions Alphabet memory stretcher "I went to the store and I bought a ____ b ____" "What's My Name?" "Who Am I?"	Objects for "Show and Tell" Field Trips Films, Filmstrips Alphabet pictures on wall

C. ACTIVITIES EMPHASIZING BASIC VISUAL SKILLS

	Activities	**Materials**
Recognizing objects from seeing pictures of objects	Sort objects by shapes or by colors (i.e. beads, geometric shapes) Fit blocks to outlines of blocks (form boards type) Sort out pictures of similar things (Animal Rummy), cards, etc. Discuss likenesses and differences, read pictures Find missing parts in pictures; Recognize different pictured views of the same object	Beads — Parquetry Blocks Geometric shapes in cardboard Film strips SRA "Red Book", etc. Frostig — Form Constancy sheets

Perceptual matching and visual-motor matching	Copy simple designs with sticks or on Peg Board Match block or parquetry design patterns Match Picture Dominoes; "Old Maid" and other card games Copy simple designs; Follow Dot-to-Dot Pictures Finish incomplete designs.	Peg Boards — D-Stix Flexagons — Dominoes Animal Rummy cards Continental Press Materials
Visual Discrimination	Using work sheets of discrimination tasks to verbalize explanations for decisions about "same" or "different" Using work book exercises for discrimination based on: external form relative size, position, in space, internal detail, color, texture, number of items, etc	Frostig — position in Space Sheets
Comprehension and Interpretation (Associating verbal labels with familiar pictures)	Collect pictures of objects which are similar in shape or color and label them Sort and group pictures on the basis of experience and discuss these Find pictures of related objects and describe how they are different (bicycle-tricycle) Discuss pictures of familiar scenes and how we know what they are (Spring, Fall-Day, Night, etc.)	Assorted pictures of familiar objects and scenes similar objects, shapes Picture books of common words and experiences
Perception of Space	Use arms to measure size of objects nearby and from a distance (across room — playground) Talk about relative sizes of different objects (cars, trees, houses, horse, dog, turtle, etc.) Discuss shadows and other clues to distance (relative size, angles) Sun Dial Marking pictures for L-R Develop concept of under-over, near-far, up-down	Yardsticks and tape measure or ribbon

D. SUGGESTED ACTIVITIES EMPHASIZING ASSOCIATIVE TASKS

	Activities	**Materials**
Learning Labels	Label familiar objects, then find additional names for them Draw pictures to help emphasize new words, ideas and concepts Make scrap books of special interest to individual children Make lists of new words and ideas; Emphasize use of new words Set up classroom "Museum" or display case for collection of special interest	"Experience Corner" Bulletin Board Picture books of animals, etc Picture dictionaries and Encyclopedias Film Strips, Movies, Scrap books
Verbalizing Experiences	Answer routine questions using the structure supplied by the teacher Describe oneself and others; Describe objects or pictures "Show and Tell" structured to extend vocabulary Relate first hand experiences Listen to stories and answer — "What comes next" or "How does it end"	Field trips Experience chart paper Simple storybooks about children Mirror Collection (rocks, shells, dolls, etc.)
Classifying Experience	Arrange the children in the room by different groups: by age, height, sex, etc and discuss groupings Arrange objects according to shape, color, or use and discuss "Why" Arrange objects or pictures in groups and explain why Select pictures to illustrate concepts like furniture, play things, food, etc	Assorted objects and pictures

Seeing and Describing Relationships	Select pictures to show opposites; big-little, young-old, etc. Keep lists of new descriptive words and use them regularly Use readiness work sheets on things which belong together and tell why Use pictures to express idea (i.e. hen and chicks and extend to other examples)	Ribbons Continental Press Materials
Forming new concepts using categories	Practice arranging objects in more than one way and discuss Discuss sub-groups of "chairs" and "tables" belonging to the larger sub-group "furniture" and find new items to add to the group Show that "animals" as a group includes smaller groups like "pets" or "farm animals" etc. (Use films) Alphabet "Memory stretcher" game	Color, Cut, Pre-Paste SRA "Red Book"

E. SUGGESTED ACTIVITIES EMPHASIZING THE USE OF THE LANGUAGE SYSTEM

	Activities	**Materials**
Using Language Pattern	Ask children to complete the last line of familiar rhymes Have children retell favorite stories Memorize poetry and songs Child repeats verbatim phrases and sentences increasing in length Child gives the opposite word or first word he thinks of in response to words from teacher	Pelagie Doane's "Small Child's Book of Verse" Mother Goose Rhymes "Tell-it-again" Stories
Express Ideas Accurately	While looking at two similar pictures, child describes one until class can identify which Describe different surfaces and substances so others can identify them Child describes object hidden from class view until it is identified Use of pantomime to show an action or activity	Miscellaneous small objects Pictures of similar/different things "Touch" Board
Express Ideas Creatively	Look at object or picture and make up story about it See how many different ways we can say the same thing, i.e. chair, bench, seat, stool, etc. Class creates "Once Upon a Time" story, each child adding to it in turn Recalling incidents, i.e. "The funniest thing I ever saw"	Pictures for interpretation Unusual objects Family or puppets Continental Press Science Observations
Associating Sound with Symbols	Make picture charts for each letter of things which begin with that letter Point to all pictures on a page which begin with a certain sound Identify animals and other things from the sound they make Listen to words and identify the letter of the beginning sound	Happy Times with Sounds (Allyn-Bacon) "Learning Letter Sounds" "Sounds the Letters Make" Phonic Picture Alphabets
Integrating verbal and visual activities	Look at picture and tell what the people are saying Select from several pictures the one which belongs with a story Use visual and motor clues for memorizing poems and songs Use sequence of pictures and clues to tell a story in order	Continental Press-Beginning Sounds See-Quees Puzzles Records (The Puppets) Pictures for Interpretation

The Person Called Learning Disabled and Behavior Disordered

From Reynolds & Birch, *Teaching Exceptional Children*
Reston, Va: CEC, 1977.

Chris Nassar had always been a "good boy," outgoing and quick. His father, a successful pharmacist, enjoyed Chris, and so did his mother. Two years ago, however, clouds began to mar the school scene.

The second grade teacher had been uncertain about whether Chris should go on or stay another year. He was promoted, but slow school progress persisted. The family's concern mounted along with the third grade teacher's. Chris struggled with language arts skills. His arithmetic computation progress was satisfactory and so was his writing. But he came home with *D*'s, *F*'s and occasional *C*'s in reading and spelling (of course, he could not be expected to spell and write words he could not read). Mischief and disruption in the class were on the rise, too.

At home he was not the same easy going funster. He did not want to talk about school and was irritable in response to his family's often repeated, "What's wrong, Chris?" The notes about misconduct in school grew more urgent. His early promise of achievement and good adjustment had dissolved, replaced by discouragement and evasion. His mother's words about that time were: "I'd say we were worried about him, and upset, too. We were afraid to talk or think about the future."

Chris's personal dissatisfaction with marginal, increasingly weak and unrewarding school performance was growing. The directions appeared to be set toward heightened hostility, truancy, frustration induced agression, and finally, dropout.

Yet, within a year these conditions were completely reversed. Chris's school attainments satisfied him and his parents. Both could see ahead to using education to help toward competent citizenship and productive adulthood, including pleasure in employment and worthy use of leisure.

How was this magic worked? What happened to shore up Chris's faltering educational development and to establish a firm foundation where there had been serious gaps, slippage, and danger of collapse?

It was not a miracle, though Mr. and Mrs. Nassar might not agree. It was the result of the solid, systematic, professional work of two teachers who joined forces on Chris's behalf. When what they did is outlined in brief, as it is here, it seems too simple. High quality professional teaching does have an appearance of elegant simplicity that belies the energy, concentration, and control it demands of the teachers conducting it.

First, the teachers studied Chris's records and interviewed his parents and his previous teachers. They obtained the parents' approval to have various tests administered to Chris if the test information might help the teachers to discover how to assist Chris. They *listened* to what the parents and other teachers had to say. They probed to get information about what had and had not been done when Chris first appeared not to be responding satisfactorily to instruction.

Second, they asked Chris to talk with them about his school experiences. They were careful to keep this on a positive and nonthreatening plane. They let Chris take the lead and question them, as he wished, regarding the purpose of the discussions and where they might lead. Chris's record had some good spots in it, even a few recent ones. They showed Chris that they were honestly favorably impressed with that part of his record.

Third, they spent considerable time analyzing what the records and interviews had produced. They started with the question, What is the *simplest possible* answer we can imagine to why Chris's educational picture might have developed as it has? It turned out to be inadequate learning of the most rudimentary word analysis skills. If that was what had happened (or failed to happen), and if it had not been subsequently corrected, it would explain Chris's erratic and far below par performance in reading and spelling.

Fourth, they talked with Chris again. They asked him, in private, to read aloud to them from some samples of second, third, and fourth grade texts. When he stumbled on words they watched and listened to see how he proceeded in trying to determine what they were. Then they asked him to tell how he went about trying to unlock the pronunciation of an unfamiliar word. It was true; they saw that he lacked an orderly way of attacking new words. Their empathetic attitude encouraged Chris to talk more about himself and his school work than he had for a long time.

They tried Chris on some nonsense words they had made up, like *stelp, trug, enol, whelgat,* and *wistob*. They taped his efforts and studied them later and confirmed their earlier impression that he was applying a haphazard, self designed set of procedures that were of limited effectiveness in determining how to pronounce a word unfamiliar in print.

The fifth step taken by the teachers was as important as their discovery of what Chris had not mastered. This step was the selection of a working hypothesis about *why* Chris had not mastered word analysis skills. Certainly the records indicated that the earlier grade teachers had taught them, that other children in their classes had learned them, and that Chris had been in school during that time. So it was tempting to think that there must be some other factor — undetected minimal brain damage, an emotional block, a perceptual disability — in the way. And did not his recent record of irritability, poor attainment, and disruptive behavior suggest something like that?

The teachers knew, though, that there were dozens of transitory conditions common to these years that were most likely culprits: fatigue, wandering attention, temporary hearing impairment, concerns about social relations, and many others. They also knew that teachers cannot always monitor their pupils' mastery of skills and content as thoroughly as they would wish. So the working hypothesis they elected to follow, at least for a start, was that Chris could probably have learned good word analysis skills and that there had been unsatisfactory or inappropriate initial teaching.

It is important to notice where the responsibility rested. There was something wrong with how Chris had been taught at the beginning and with the follow-through of that first teaching. At the same time, allocating responsibility was not considered the same as allocating blame or impugning the competence of prior teachers. Most of Chris's classmates had prospered under the same teachers. It was a recognition that teachers, like all professional persons, operate constantly with an acknowledged margin of error.

The sixth step was to plan, put in writing, and carry out a personalized instructional program to teach Chris the word analysis skills whose absence appeared to be playing havoc with his school life. The teachers conferred with Mr. and Mrs. Nassar, explained the special education program they wished to try, and obtained approval to do so. Most of the work was done in the regular class. Chris was helped to work on his own much of the time. An aide and an older pupil volunteer took part, too, under teacher supervision. The Nassars helped at home. Chris kept track of his own improvement on frequent teacher made, criterion referenced tests. At first, rewards in the form of special privileges were often necessary to keep him at the tasks. Success bred increased satisfaction and keeping a chart of improvement became reward enough in itself.

After a few months, the teachers were able to take the seventh and final step. At a conference with Chris, his parents, and the school principal (who had supported them all along) they proposed that the special education program be discontinued because a special program, as such, was no longer necessary. Individualized instruction would continue, but as a normal part of the ordinary course of school events. They did leave the door open to regular class teachers to have consultative aid, if desired, from the special education teacher who had been one of the partners in the whole operation concerning Chris.

This is only one example of the many faces of learning disabilities and behavior disorders and their educational management. Certainly not all work out as smoothly as this one (and it had many rocky stretches along the way). But the principle is there: The great bulk of learning and behavior problems appears traceable to initial instruction that did not attend well enough to a close match between what the pupil needed and what was being taught. Knowing what to do about it, as these teachers did, can turn the problem around.

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5. Secondary Classroom Teachers

V. Secondary Classroom Teacher

What Do I Look For?

Traditionally, the trained secondary teacher has had no course work on the teaching of reading skills or the characteristics of exceptional children.

The secondary teacher does not expect problem learners and has not been taught how to handle them. Here, even more often than in the elementary school, the problem learner may be labelled as "lazy", "not trying" or "not working to potential or expectations".

The secondary teacher needs to observe carefully the students in all classes. Notes on behavior that might indicate disabilities are important. Work samples with notes on what was assigned and what was expected will help indicate problems.

Turner (1975) indicated on the secondary level, specific disabilities may be manifested in a variety of school-related areas including:
- Subject-related skills: arithmetic, spelling or reading;
- Receptive and expressive language: listening, speaking, reading, writing;
- Judgment processes: reasoning, social behavior;
- Sensory-motor integration: time orientation, spatial organization;
- Perceptual-motor abilities: visual and auditory discrimination, eye-hand coordination, fine muscle coordination.

The disability of a single student, however, will not encompass all these areas. Instead, a pattern of success in some processes and failure in others will usually be evident. Typical cases include:
- the seventh grader who reads at tenth grade level but cannot do fifth grade arithmetic;
- the history student whose test performance is B when based on lecture material (auditory strength) and F when based on textbook sources (visual or reading weakness);

Failure to identify correctly such inconsistent performance patterns often leads to labels of "lazy", "unmotivated" or "slow" when the student fails to meet expectations. This begins in the early grades, and its detrimental effects on both attitude and achievement mount each year. By secondary age, frustration and misunderstanding have resulted in low self-esteem, expressed in many cases by withdrawal or aggressive behavior.

Meanwhile, academic achievement falls further and further below grade level as the student ceases to initiate efforts he knows will be unsuccessful. To reverse this trend, teachers must find ways to show the child that he **can** learn.

What Can I Do to Help?

The secondary classroom teacher in each subject area must be aware that learning problems do exist. Presentations, assignments and expectations should be flexible for students.

Turner (1975) has explored areas of disability and made suggestions for the home, the learning assistance centre and the classroom.

Disability Area	Home Approach	LAC Approach	Classroom Approach
Arithmetic Reasoning	Have child help plan a trip, figuring miles to be traveled and cost per day	Present problems such as: If we wanted to paint the lab, how large an area would we have to cover?	Stress methodical working of problems. Give credit for taking correct steps even if computational errors are made.
Expressive Language	Encourage verbalization, especially when it involves organized thinking.	Have small-group story-telling. Assign creative writing.	Hold class discussions. In writing, give separate grades for ideas and mechanics.
Reasoning with Cause-Effect Relationships	Set up rewards or punishments that are contingent upon abiding by rules or fulfilling home responsibilities.	Discuss cause-effect relationships in social situations. Set up rules: "If your daily contract is met, you receive your reward" (candy, privilege, free time).	In science experiments and history studies, a[illegible] for causes of events. [illegible] English, examine reasons for character's actions. In math explain why reversible properties are true.
Time Orientation	Teach telling time. Buy student a watch. Structure the time for household chores.	Discuss seasons, months, days. Discuss significance and dates of holidays.	For English, outline steps in making a good book report. In history, stress chronological order.

Gross Motor Skills	Encourage joining of organization such as scouts or YMCA. Arrange swimming lessons. Send student to summer camp.	Give practice on balance beam or trampoline. Use exercises for specific task skills.	Encourage student in non-competitive physical activities.
Academic Motivation, Self Confidence	Comment on student's school success. Ignore his shortcomings.	Develop rapport with student. Start work at present achievement level to build record of success; gradually increase difficulty.	Concentrate on praise; lessen criticism. Call on student when you know he knows the answer.

It is important that the classroom teacher takes into consideration some of the concerns of Ken Weber as quoted in Sallot (1976.)

A professor of English on the faculty of education at the University of Toronto, Weber, the author of *Yes, They Can!* sums up his attitudes about teaching adolescent slow learners. He also masterminded Think Lab, a classroom teaching aid designed to involve students in creative problem-solving. In addition, Weber teaches part time to keep in touch, and gives seminars across Canada to introduce teachers to new methods.

He suggests the system has failed learning disabled students in two ways — by not offering sufficient motivation to learn, and by emphasizing textbook knowledge instead of teaching them how to think.

"If these kids want to learn, they can. It's as simple as that," says Weber. He points to what he calls the hormone theory of reading. "One of my students brought a pornographic book to school. It went through that class of non-readers in a week, and everyone managed somehow to read that book."

The same thing applies to drivers' training manuals. "In a class of 16-year-olds I had, all but one were able to read the manual and pass the written test. If they're motivated to learn, they can do it."

Weber estimates that 92 percent of the average high school curriculum is devoted to rote-learning specific facts. "Learning disabled kids don't do well at that because they don't give a damn. What they are good at is thinking — synthesis, analysis and application; something most schools don't spend much time on."

That isn't to say that by changing the curriculum approach his students become instant scholars. "I'm not suggesting we can eliminate failure. But we can eliminate defeat. The first time one of my students comes across a tough word, he's likely to slam the book shut and give up. Learning disabled kids are conditioned to think, 'If at first you don't succeed, quit.' But I tell my students that even people such as Thomas Edison, Cardinal Cushing, Einstein and Winston Churchill were all written off in childhood as hopelessly learning-handicapped".

At the same time, new research demands that school systems scrutinize themselves and their methods, says Weber. For instance, statistics in North America have long indicated that boys have more reading difficulties than girls. But recent studies in Germany and Kenya where there are more male teachers in primary grades indicate that boys in those countries learn to read more easily than girls. Is teaching somehow sex-linked? No one seems to know for sure but perhaps we ought to find out.

"We have to ask ourselves what it is we're trying to do, what it is we're trying to teach our kids. Parents have to play a more active role, too. It's partly their responsibility to keep in touch with the teacher," says Weber.

Weber and other have designed special materials for adolescents with learning problems. Teachers can request information and samples from publishers to identify materials appropriate for their subject area and grade level. Publishers are listed in the appendix.

It is also important to continue professional reading in the area of special education. A special credit program for secondary teachers is described by Wetherington (1975).

A comprehensive high school with an enrollment of about 2100 and a faculty of a little over 100. In a school this size we could find up to 200 learning disabled students. Since our school system has reached its terminal number of teaching units in special education, we could not expect to add new teachers to teach the secondary LD student. Thus, an alternative method of teaching this student had to be found.

Since secondary teachers are trained and hold certification in a specific subject area, it would be impossible to expect to find a teacher who could hold certification in the many subject areas of high school plus the area of learning disabilities. It was felt if we could designate a few teachers in each of the major subject areas of high school, e.g. English, Math, Science, and Social Studies, and give them background and teaching expertise in the area of learning disabilities we could train a nucleus of high school teachers to handle the LD student within the high school.

With this idea in mind we approached the school system administration and found that staff development and in-service funds were available in the area of general education and special education. Next, the special education department of the local college was contacted and the chairman of learning disabilities was so interested in the concept for providing the secondary LD student with help that he offered to help design and teach a course for the regular high school teacher above his regular teaching load. Next, the principal of our comprehensive high school was approached. He and his administration were very open to this idea since the lower level high school student as well as the learning disabled is a constant problem in a curriculum designed for the average student, and often a discipline problem as a result of inappropriate curriculum. Finally, the faculty of the high school was approached and a tuition and textbook-free course for graduate credit was offered. This was financed through staff development funds. Over one-fourth of the high school faculty immediately signed up for the coursework. The course was set up to meet on Saturday mornings. It was also designed to meet about every three weeks, with assignments or experiments that the regular teacher would attempt with her low functioning students and have reactions ready for the next class meeting. It was felt that only through a longer slower process of coursework could a real in-depth and meaningful understanding of learning disabilities develop for a regular class teacher.

We now feel that a teacher trained in learning disabilities could be assigned as a consulting teacher or facilitator to the high school. This teacher would be available for four periods to help the teachers in the departments of Math, English, Science, and Social Studies adapt, modify, breakdown and simplify assignments to meet the individual needs of students. The planning periods of these teachers would need to coincide with those four periods.

One period would be spent with a resource room type setting to which a small number of the most severe LD students would be assigned. One period would be left for planning. It may be that as this is developed, the academic needs of the behavior disordered child could also be met through this plan. It may also be that one teacher could serve both the high school and the junior high school.

We have only made a beginning in the area of secondary LD, but we feel that utilizing the subject area expertise of the regular classroom teacher and strengthening her with knowledge in the LD area will begin to meet the needs of the LD student at the secondary level.

This program of training teachers has implications for all secondary teachers and administrators.

What Do I Say to Parents?

Parents should be informed about their child's progress in school. In the secondary setting it is important that a teacher or counsellor take the advocacy role for a student with learning problems and make sure that home-school channels of communication remain open.

Parents can provide information on the student's physical and school history that may help with program planning.

Teachers need to discuss their programs and expectations with parents so that a consistent program can be followed during the secondary years. Successful flexible assignments and work should be shared.

Records should be kept on student successes for parents and for post-secondary planning.

Readings included in this section are Kronick (1976) discussing some of the things that are being done at the secondary level and Csapo (1977) who gives a historical perspective to British Columbia's secondary programs.

From a Parent — What Is Being Done

Doreen Kronick (Co-founder, past president) Ontario Association for Children with Learning Disabilities

"Before speaking to secondary school personnel in New York State recently, I researched services for the adolescent in North America very thoroughly. The picture that emerged is upsetting. The needs of the not-too-bright, very handicapped kids are being met, more or less, in occupational programs. The very involved, more intelligent kid is lucky if his needs are met in the resource classes which are available on a very limited basis in a few communities. However, the moderately to mildly disabled youth is the all time loser."

The implied assumption that learning disabilities disappear by secondary school seem apparent in the following observations made by Mrs. Kronick regarding the current structure of programs:

1 Although elementary schools take into account variations in development and progress, by the end of elementary school every one is magically supposed to

have attained readiness in all academic areas. The secondary curricula are based on this assumption of readiness.

2. The same intervention facilities (such as consultants in special education) are available to secondary schools as well as elementary schools. However, secondary schools are far more insular, tending to utilize these facilities minimally, if at all.
3. Secondary school guidance personnel and headmasters are not knowledgeable about learning disabilities. The atmosphere of secondary schools seems impersonal. It is subject oriented, not student oriented.
4. Information on the needs of individual students often is not disseminated to each teacher at the start of each school year.
5. The structure of a subject is largely left to the individual teacher to design. Therefore a learning disabled child and his parents can never guess whether the child will be able to handle a specific subject, even though he has handled it well in the past. His success or failure will be dependent upon the demands of the teacher.
6. Parents and children are unfamiliar with the specifics of new subjects recently added to secondary curricula, and have chosen ones ill suited to the child's abilities.
7. The credit system is enabling more learning disabled youth to handle an academic program than have been able to in the past.
8. If a child cannot handle a subject even with flexibility and individual instruction he should not continue to take it just because he needs it for college entrance. Colleges are becoming more flexible in entrance requirements for young people.

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6. Secondary Special Programs

VI. Secondary Special Programs Learning Assistance

The secondary school timetable provides a variety of methods for delivering learning assistance services to the adolescent with learning problems.

The major premise is to ensure that the student is integrated, as often as possible into classes and activities where he can succeed. In addition support should be available where needed.

Double blocks of time for basic language arts and math can be taught by the learning assistance teacher. The learning assistance teacher may work as a consultant to an identified group of subject area teachers who have indicated a willingness to work with students with learning problems. Students may be scheduled into a short-term intensive remediation session. Turner (1975) discusses the problems of this type of scheduling:

> Scheduling generally follows one of three patterns. If learning assistance centre enrollment is planned before the opening of school, learning assistance centre periods can be scheduled in place of an elective course. If enrollment begins later in the year, two arrangements are possible. Whenever feasible, an elective is given up for learning assistance centre. In other cases, however, required classes must be missed and careful plans must be made to insure progress in the subject or subjects affected.
>
> In the last of these instances, the pre-enrollment conference enables the learning assistance centre teacher and classroom teacher to decide on goals they hope the student can attain. Experience has proved that students can best meet teachers' expectations when objectives are clarified in advance. Policies for makeup work must be established, and realistic adjustments in homework and class participation requirements should be made.
>
> Without these measures the student would in effect be penalized for seeking needed instruction in place of his regular class. With them, however, the teacher makes an invaluable contribution to the student's disposition toward achievement.
>
> Teachers need both recommendations and ways of implementing them. To this end, the pre-enrollment conference focuses not only on scheduling but also on sharing diagnostic findings and resources.
>
> Emphasis is given to concrete assistance for implementing recommendations at minimal expenditure of time for the classroom teacher. When implementation plans are discussed in conference, the following may be offered for each student.
> — description of the student's most successful learning modes;
> — suggestions for working through these modes;
> — loan of appropriate material and equipment for implementing suggestions;
> — preparation of clerical aid for implementing suggestions.

Public relations with the school staff are most important for the secondary learning assistance teacher. Each teacher needs to know what the learning assistance teacher does and what the possibilities are. Staff and departmental meetings can discuss the most effective use of learning assistance time and identify pressing needs.

The use of peer tutoring has grown at the secondary level. In this program the learning assistance teacher organizes schedules and monitors tutor and tutor time in a variety of subject areas. The tutors receive training and follow-up their work with teacher conferences. Some of the materials from this program follow, (Gilchrist, 1977).

Weber (1977) gives a wide variety of suggestions, applicable to all subject areas for both classroom and learning assistance teachers at the secondary level. His use of high interest — low vocabulary material is explained in great detail.

The area of secondary learning assistance is changing from the occupational mode to the supportive integrated model. At the present time no training courses are available for the teachers who have chosen this difficult but rewarding task. Some have adopted successful elementary methods, others have designed their own materials and programs. The difficulty of functioning within a rigid timetable will continue to cause problems with the learning assistance program. Many teachers have circumvented this with team teaching, special blocks, consultation time with subject area teachers and student release time.

The growth of mini-courses in the more flexible secondary timetable has also helped the student with learning problems. Shorter, high interest classes, designed as self-contained modules, provide alternatives for meeting secondary requirements.

Few materials are available in this area. The following readings include exerpts from Gilchrist's (1977) peer tutoring handbook. Wong's (1977) material on teaching reading and comprehension has implications for all secondary subject areas. Holte's (1972) presentation on the learning problems of adolescents he has seen in court has special concern for the secondary teacher. The material from Edington provides some practical suggestions and Weber's (1977) bibliography provides additional sources in the area.

Work Study/Work Experience

These pages are from: E. Gilchrist, *Courtenay Junior Tutorial Program: Tutor's Handbook*. CJS, 1977.

Many secondary schools in British Columbia have initiated work – study/work – experience programs under the B.C. Ministry of Education.

These programs provide experiences for students in the working community. The guidelines from the Ministry are:

A. Objectives

The objectives of the Work Study — Work Experience Education are to assist students to discover first hand, the meaning and value of employment, to discover personal abilities and interests relevant to employment, to discover the relationship between education and employment and to gain a greater sense of purpose and direction.

B. Rationale

A primary purpose of our schools is to assist students to prepare for satisfying and successful employment. The increasing complexity and rapid change of our society and the world of work is demanding better educated citizens and employees. Most of our schools are unable to effectively simulate employment experience. A good way to assist students to gain experience is to actually place them under controlled conditions, in the labour force.

C. Some Benefits of Work Study — Work Experience Education

(a) **For the Student**

1. He learns to assume responsibility.
2. He gains knowledge and attitudes necessary for successful job performance.
3. He acquires good work habits.
4. He learns how to get along with fellow workers and employers.
5. He develops personality and poise.
6. He develops an understanding and appreciation of the relationships between formal education and job success.
7. He explores the fields in which his vocational interests lie and determines whether or not these fields are suitable.
8. He broadens his understanding of the occupational world and of working conditions in the world of work.

(b) **For the School**

1. It provides an opportunity to relate academic and vocational training to job requirements.
2. It utilizes many community facilities and resources for training purposes therefore making it possible to provide training in fields that the school programme could not otherwise serve.
3. It increases ability to hold students for a longer period of time.
4. It provides assistance in occupational guidance.
5. It enables the school to keep abreast with developments in the business and industrial world.
6. It provides a direct avenue through which the school can meet community needs.
7. It develops good school-community relations.

(c) **For the Employer**

1. It acquaints employers with the work that the school-trained young people can perform.
2. It provides the employer with carefully selected part-time employees who may become permanent at a later date.
3. It provides an opportunity to make a contribution to the youth of the community.
4. It increases staff motivation and work standards.

Overview of Tutor Responsibilities

Excerpts from Courtenay Junior Tutorial Program: Tutors Handbook

1. Monitoring attendance and homework in all academic subjects as well as in the tutorial block.
2. Proof read and guide all written work done by the tutee.
3. Help the tutee study and prepare for all tests.
4. Interpret text material in the subject area when when the tutee does not understand.
5. Maintain a close liaison (usually a short meeting once every 2 weeks) with the tutee's teachers.
6. Administer a corrective program in the language arts and/or mathematics according to the needs of your tutee.
7. Help to increase the tutee's confidence and help improve his/her self-concept so that school may be more enjoyable and useful.

To ensure that learning is taking place, there is a direct supervision of and for each tutor in various ways:

1. Direct observation of the tutor at work.
2. A monthly tutor report to the teacher.
3. A final, detailed summary report.
4. A daily log or plan book is checked weekly. At this time evaluation of daily lessons are made.
5. During weekly meetings of tutors, problems are aired, suggestions are made for future lessons, and there will be continued review of teaching principles.

Tutors Will Be Trained in the Following Areas:

1. Encouragement techniques.
2. The relationship of success to self-concept.
3. How to plan and prepare lessons.
4. The reading and writing process.
5. How to teach a spelling lesson.
6. How to teach computing skills in mathematics.

How to Tutor

A. GENERAL COMMENTS:

1. Be yourself — I accepted you into this program because you are the way you are. Besides the tutee will find it difficult to be relaxed if you aren't.
2. Be confident — Tutoring is just a matter of communication. The more confidence you have in yourself, the more your tutee will have in you.
3. Be prepared — Keep your log up to date and spend time planning out your lesson. It's probably best to plan at least a week at a time, and then check your weekly plan when necessary.
4. Be flexible — If something is not working, be prepared to drop it and try a different approach.
5. Be businesslike — Arrive on time, ready to work. Keep your personal problems out of it; your student probably has enough of his own without worrying about yours.
6. Be alert — Watch for changes in your student's attitude and attention. Physical traits such as frowning, fidgeting, hair twisting, etc. may indicate frustration or confusion with the work.
7. Be patient — it may take your student a little longer to learn than you, but he/she's still capable of catching on. Learn to be satisfied with small successes at first.
8. Be honest — When students asks you about his/her reading level, be honest, but not blunt. Don't make any promises about the student's progress or for anything else. Broken promises only cause disappointment and distrust.
9. Be professional — Perhaps this is the most important point. Respect your tutee's confidences. Keep his/her test results to yourself and don't discuss his/her personal problems with your friends. Respect the trust that has been placed in you.

B. HOW TO HELP A TUTEE FEEL CAPABLE, WORTHWHILE AND RESPONSIBLE:

1. **Basic Principles:**
    - (a) **Recognize his/her self-concept** — How the student views herself/himself will affect her/his performance.
    - (b) **Encouragement** — Unless you have faith in the tutee you cannot communicate encouragement to him/her. At every step of the tutoring procedure, the key to success lies in the kind of encouragement the tutor gives the tutee. Refer to sheet on "Encouragement Techniques."
    - (c) **Provide choices** (usually 2) — By providing choices, the tutee will have a say in how, when and what she/he learns. This involvement will affect her/his attitude towards learning. Refer to sheet on "Ways of Providing Choices"

(d) **Natural/Logical Consequences** — Allow the tutee to experience the consequences of his/her choices or behavior, rather than resorting to punishment. Be sure the tutee knows what the consequences are, but don't keep reminding. Refer to sheet on "Natural Consequences".

(e) **Action instead of words** — Don't threaten, remind, continually explain or lecture the tutee. Let the natural consequence happen or follow up with a logical consequence.

(f) **Firmness without domination** — Be firm about the consequence. You can't force the tutee to do anything he/she doesn't want to do. Let him/her know you can't force him/her. Firmness may gain respect, domination rebelliousness. Combination is an infringement upon a right.

(g) **Withdrawal of services:** Be aware of the *4 Goals of Misbehavior*

- i) Attention getting
- ii) Power-struggling
- iii) Revenge
- iv) Using disability as an excuse

If tutee wants continuous attention, to show power or revenge, the withdrawal of your services and attention will have a greater impact on the tutee, rather than your involvement. Withdrawal is not surrender, but counteraction. It removes the audience without which there is no attention-getting or power struggle.

ENCOURAGING TECHNIQUES

A. Establish a Friendly Atmosphere:

The tutor will **first** need to establish a friendly relationship with tutee.

1. Call the tutee by name.
2. Smile.
3. Act friendly.
4. Sit next to tutee.

B. Supporting the Tutee During Tutoring:

At every step of the tutoring procedures, the key to success lies in the kind of encouragement the tutor gives the tutee.

1. recognize the mastering of specific skills.
   e.g. You know how to stay on one topic well. You know how to use the homonyms: their, there and they're.
2. recognize how the tutee feels towards practising the mastering of skills.
   e.g. You seem to feel good about reading without losing your place.
3. recognize frustration when tutee has difficulties.
   e.g. You feel frustrated with ________ today.
4. help with errors in a positive manner.
   - (a) emphasize the question, not the wrong answer.
   - (b) ask the question again.
   - (c) help find the answer.
5. acknowledge to the tutee that you may have chosen inappropriate material.
6. give **unexpected** reflections on how you feel about an interaction.
   e.g. I enjoyed working on that assignment with you yesterday.

C. Encouraging Independence in the Learner:

The following procedures would be beneficial if introduced at the beginning of tutoring and stressed increasingly as tutoring continues:

1. Help the learner find the answers instead of giving them to him/her. (When a tutee asks you to do something for him/her, ask yourself whether he/she can do it himself/herself.)
2. **Unexpected recognitions:**
   When the tutee shows he/she can work independently or shows mastery of skills, make a remark indicating that you have noticed **BUT NOT JUST AFTER HE/SHE HAS DONE IT.**
   e.g. You were able to ________ on your own.
   I knew you could ________ on your own.
   I've noticed that your handwriting is improving.
   (Other teacher) mentioned that you are improving in ________

ENCOURAGEMENT vs PRAISE

Encouragement	**vs**	**Praise**
for effort; improvement		**for competition**
for person's strengths		**for being better than another**

How to Encourage:

1. You handled that well.
2. You tackled that problem well.
3. You're pleased with your progress.
4. You'll figure it out.
5. I'm sure you'll work it out.
6. I really appreciate ______________ because it makes my job easier.
7. You have skill in ______________.
8. You really worked hard on that.
9. You really spent a lot of time thinking about that.
10. Look at the progress (specific) you've made.
11. You're improving in ______________.

Teaching and Improving Comprehension Skills Among Learning-Disabled Adolescents

Bernice Wong *Simon Fraser University*

Comprehension plays a vital role in reading (Weiner and Cromer, 1967). Although reading acquisition poses as the obvious problem among learning-disabled children/adolescents (Bateman, 1976), comprehension problems are not to be ignored (Wiig and Semel, 1976).

Recently, Waugh has done some fine work on analyzing the teaching and/or improvement of comprehension among students in the junior to senior highschools. The purpose of this paper is to summarize her work in order to enable us to provide timely and resourceful help to the learning-disabled adolescent's comprehension problems.

The summary begins with a task-analysis of comprehension. This is followed by a brief description of characteristics which discriminate the good comprehender from the poor comprehender, and several useful techniques in teaching and improving comprehension.

Component Elements in Comprehension

A task-analysis of comprehension results in five major subskills:

1. Identifying the separate ideas, concepts or "elements" of a message.
2. Seeing possible relationships among the various ideas or "elements".
3. Giving weight to those ideas or "elements" on the basis of past and present information.
4. Screening selectively for retention, specific pieces of information.
5. Reaching a conclusion.

Discriminating Characteristics Between Good and Poor Comprehenders

What characteristics distinguish reliably between students who can tackle comprehension assignments independently and those who need special instruction? The former students appear to have developed a cognitive map for the whole comprehension process with little or no instruction. They succeed readily in (a) *isolating* the main idea from a passage, (b) *discriminating* relevant from irrelevant information and (c) *summarizing* the information or content of the passage. In contrast, learning-disabled children and adolescents have problems in selective attention (Hallahan and Kauffman, 1976; Ross, 1976). They cannot screen out irrelevant information in order to focus on relevant information. Selective attention problems thus interfere with their ability to isolate main ideas for concentrated focus. Sequential memory problems (cf. Wallace & McLoughlin, 1975) interfere with their ability to summarize, in logical and proper order, contents in any passage.

Useful Techniques in Improving Students' Comprehension

Waugh suggests the following useful techniques for improving students' comprehension:

1. *Determining students' decoding skills.* Learning disabilities professionals all recognize that decoding must precede comprehension. Bateman (1976) recently re-emphasized the importance of teaching decoding to the learning-disabled. The first step then is to pinpoint the child/adolescent's level of decoding skills and to follow it up with appropriate remediation where necessary.
2. *Determining a match between student and book.* There are several procedures which enable a teacher to match reading ability of the student with difficulty of the material. A teacher can match readability of the text with achievement test scores of the student or use the more direct Cloze procedure.

The Cloze procedure consists of the following steps: (1) A Cloze passage is a 250-300 word passage typed from the text being considered for use. (2) Blank lines of equal length are substituted for every fifth word. (3) The entire first and last sentences are usually left intact. (4) Students read the passage and attempt to fill in the blank spaces with the exact word selected. (5) Percentage of correct responses are then computed and decisions are made about the appropriateness of the text for a group or sub-group of students.

The major advantage of the Cloze procedure lies in the results which provide a measure of the match between the language of the reader and the language of the text. Items on traditional comprehension tests can often be answered by general background knowledge possessed by the student. With the Cloze procedure the results are more related to the specific material to be read. However in using the Cloze procedure, teachers should be aware of two points. First, percentages of correct responses are low in comparison with the correct percentages expected on most other tests. Thus it is advisable that teachers present the Cloze procedure as a guessing exercise rather than as an examination. This way students would be spared the feeling of failure often associated with getting half the answers correct. The relevance of this point to learning disabled children/adolescents is self-evident. Second, books may vary in difficulty level throughout different portions of the text. Thus a more accurate measure would be found by the teacher's using more than one Cloze passage from the same book.

The scoring of the Cloze passages is as follows. Only the exact word is counted as correct. Synonyms or other semantically correct words which do not duplicate the original text are counted as incorrect. Interestingly the percentage correct does not change significantly when synonyms are permitted. However scoring synonyms can be complicated because subjectivity appears inevitable in deciding which synonyms are permissible. Spelling errors are typically discounted if the word intended can be determined. Teacher's construction of an overlay facilitates speed in scoring.

Certain guidelines are suggested in interpreting percentage correct on the Cloze passage(s): Independent level = 60-100%; instructional level = 40-60% and frustration level = 40% and below. If a student gets 60% or more correct on a Cloze passage, the book is too easy to provide challenge and should be supplemented or replaced with more difficult reading material in order to achieve optimum student progress. If the percent correct falls between 40 and 60 percent, the book is of appropriate difficulty for that student. Lastly, if the percentage correct falls much below 40, the teacher should search for easier books for this group, or provide much preteaching of vocabularly and concepts prior to expecting the student to read the book.

Use Proven Teaching Procedures

A common procedure in teaching comprehension involves the teacher giving the assignment, having the students read and then checking comprehension by asking questions or requesting written responses. However, research evidence indicates clearly that most students will learn significantly more if the teacher sets the stage for comprehending. The most important thing to remember about teaching comprehension then, is that instruction should come *before* the students read rather than after.

Two procedures in teaching and improving comprehension proposed by Waugh (1976a) will be summarized. These procedures have been found to be effective teaching tools.

The Survey, Question, Read, Review, Recite Procedure (SQ3R). Systematic use of the SQ3R method has been reported to raise achievement of students from sixth grade through college above the achievement of control groups not using the same method. Basically the SQ3R method creates an active questioning and evaluating attitude which is essential for improved comprehension among readers. The steps in SQ3R involve:

1. Survey — The student previews the material to get the main idea, reading title, bold faced headings, summary, graphs and illustrations.
2. Question — The student turns the title, main headings or italicized words into questions.
3. Read — The student reads in an attempt to answer the questions just raised.
4. Recite — In this self-examination, the student paraphrases the new-found knowledge in his/her own words.
5. Review — Transfer the new information to life situations, to further acquisition of knowledge, to class discussion, and encourage assimilation, integration and organization.

The Directed Reading Activity (DRA). This method resembles the SQ3R. The instructional objectives are identical to those of the SQ3R. Both methods aim to encourage the pupil activity to *select*, to *reject* and to *relate* bits of information in improving comprehension. The steps in DRA involve:

1. Set the stage — The teacher provides background to develop interest and relate new information to known material.
2. Introduce new words — The teacher's goal is to provide specific meanings to words as they are used in a given context as well as to introduce unknown words or concepts.
3. Students read — A purpose is stated for reading.
4. Follow-up activities — This step involves both paraphrasing and application.

Choosing a Textbook to Improve Student Comprehension

Waugh suggests choosing textbooks with these features:

1. A short summary (or advance organizer) presented prior to a more lengthy text passage. (Advance organizers are summary statements which help students grasp ideas.)
2. Select texts with question organizers. Questions interspersed within the text or placed at the end of a selection seem to perform much the same function as advance organizers, viz. helping students to comprehend more effectively.

Concluding note

Because comprehension is the most complicated portion of the reading process, identification of students who need special instruction is critical. However, thoughtful and perceptive teachers realize that successful identification of students with comprehension problems must be followed by appropriate teaching strategies and materials. If the teacher selects texts with summaries (advance organizers) and question organizers and systematically teaches SQ3R or DRA, students may acquire much of the information in content areas by skillful selection and interpretation of parts of the text.

The above methods in teaching and/or improving comprehension are clearly applicable to the regular classroom situation. Our concern, however, is their application to learning-disabled adolescents in the Learning Assistance Centres (L.A.C.'s). All the methods described are indeed applicable to learning-disabled adolescents with comprehension problems either in a small group or individually. But certain modifications appear necessary:

1. The L.A.C. teacher should read through and discuss the text summaries or advance organizer with the learning-disabled students. Where necessary, the L.A.C. teacher may simplify the original version of text summaries, to ensure thorough comprehension.
2. Copies of question organizers could then be distributed, and vocabulary or unfamiliar concepts explained. These elaborations would enable the learning-disabled adolescents to focus on the target topic and to enable them to anticipate ideas in the passage.

3. The teacher may underline main ideas to facilitate the learning-disabled students to attend to, select, and follow relevant themes in the passage.
4. Lastly, for learning-disabled students whose comprehension problems stem partially from carelessness in reading, the following provision may be attempted. For these students, a tape-recorded reading of the passage may be given. They can either shadow orally or listen silently as they read the text summary, the question organizers and the text. Such a procedure limits their opportunity to make careless errors in their reading and thus increases the accuracy or thoroughness of their comprehension.

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Learning Disabilities and Juvenile Delinquency

Extracts from a lecture by The Honorable Alfred O. Holte, Judge, February 1, 1972.

Prior to becoming a judge, I was a partner in a legal firm. One of my partners was a Mr. Paul M. Williams, who had several children suffering from learning disabilities. Subsequent to becoming a judge, and while I was serving as Juvenile Court Judge, Mr. Williams approached me concerning a possible connection, if any, between learning disabilities and juvenile delinquency. I had never heard of such a thing, but agreed to make inquiries to see if there might be any such connection. I made a couple of superficial inquiries, but since i was so abysmally ignorant myself, I didn't really know what I was looking for.

As I thought back over the 700 or more cases I had heard in a ten month period while serving as Juvenile Court Judge, I had a gut reaction that made me almost physically ill. I can't remember them by name, but about 80% of the boys and half that percentage of the girls were experiencing difficulties in school. There is such an obvious pattern, once you are alerted and have some idea of what to look for, that I couldn't understand why people who have worked for years with disturbed youngsters haven't tried to do something about it.

I later discovered some dedicated persons have made some progress in this area, but they are pitifully inadequate. For some reason the schools seemed anxious to get rid of the disrupters, and the implication (and sometimes a flat statement) given to the judge is that the juveniles are too dumb or stupid or lazy to learn. As I investigated and read the material available, I noted with growing concern how people with learning disabilities transpose words and spell phonetically. Some of the correspondence which had been intercepted when mailed from detention flashed on the screen of my mind: "god" for "dog" and "tac" for "cat" were a couple of samples. Fifteen and 16 year olds spelling like second and third graders! Some of the comments by probation officers and social caseworkers were recalled: "This kid is plenty smart, but no one can motivate him"; or "he seems intelligent enough, but he reads and writes like a third grader instead of a ninth grader."

No one seemed to know exactly why we had these 12 to 16 year old illiterates who had completed anywhere from six to ten grades of school. Everyone felt sorry for them, but they were very difficult to work with. Their parents and the schools had about given up. It is very difficult, if not almost impossible, to try to rehabilitate someone who can neither read nor write. In addition, they appeared to hate everyone and everything; but I suspect most of all, they hated themselves. It is extremely discouraging to be branded a failure in the first or second grade, then carry this stigma through the sixth grade and into junior high. By that time, they are well on their way and are working full time to get out of school one way or another. Can you blame them for wanting out of a place that has branded them as failures? I suspect that not a little of the senseless vandalism in our schools might logically be traced to this same source.

During the months of November and December, 1971, with the help of five dedicated teachers, we conducted a series of tests on a random sampling of 35 children in detention. In addition, we tested, by random sample, seven others on probation. The children, the staff and the teachers all worked together after regular working hours to do this. Of the children in detention, seven (or 20%) were reading and spelling near or above the grade level appropriate for their chronological age.

Eighty percent (80%) ranged from two to seven years below what they should be doing. Of the seven on probation, all were below grade level for reading. The range was two and a half years below as a high, and six years below for the lowest. Two of the seven could spell at grade level or above, and only one of these two was in the proper grade for her chronological age.

I wrote to Mr. William L. Callahan, Superintendent of Cascadia Juvenile Reception Diagnostic Center for the State of Washington. My inquiry was concerning learning disabilities of delinquent children admitted to Cascadia. Mr. Callahan gave me some information on children admitted to Cascadia for a nine months' period, Jan.-Sept., 1970. Let me quote from his letter:

> "During this time period, 860 boys and girls between the ages of eight and eighteen were transferred from Cascadia to other institutions or were released on parole Status (about 12%). Of these 860 children,

> all but 132 of them had IQ levels of low-average or above. The 132 children with below-average IQ's tested at the dull-normal or the borderline-retarded level; however, only 18 children actually tested at the borderline-retarded level.
>
> "In other words, 84.7% of these 860 children tested at an IQ level of low-average or above. Despite the fact that 84.7% of the 860 children tested out with average or above IQ's, 51% were rated as marginal to poor in their school performance level and school motivation level. Those children falling into this 51% were, on the average, functioning two grade levels below their proper grade placement for their chronological age.
>
> "One must always keep in mind that the term "learning disabilities covers a multitude of problems with diverse and, frequently, complicated causality. Diagnostically, it is important to try to determine the specific nature of a child's failure and/or inability to learn in order to utilize the proper teaching approach and techniques to assist the child in learning. Unfortunately, labeling children's disabilities with terms such as dyslexia or minimal brain damage, tends to result in teachers and others accepting the child in such a category and dealing with the child on the basis that the condition is irreversible. Quite naturally, this is definitely not conducive to helping the child resolve his learning difficulties. It has been our experience with such children that all but a very few, **even those with minimal brain damage or dyslexia, can learn academically if the proper patience and interest is demonstrated by the teacher and the proper teaching techniques are utilized."** (Emphasis supplied.)

Creating failures, and eventually angry failures, out of non-learners, gives us an excellent source of raw material for our system of justice and is a fine way to increase the population of our institutions. That is what our educational systems have been doing with ten to fifteen percent of our school population.

For the first time in the history of the world, a child with a keen mind, alert and able, is rejected because he has difficulty learning to read.

Reading is not a process natural to man. It is a learned skill like piano playing, automobile driving or skiing. Skills are mastered at different speeds and for most skills we feel this is natural. If success in this world was based upon speed in mastering piano playing or skiing, alone, there would be a great upheavel in our culture. It is unreasonable and absurd to expect all six year old children to learn to read, without regard to the facility each child might or might not have for that task.

I am sure the frustrations these children face cause them to drop out, to turn to drugs, to act out, to reinforce and continue their delinquency patterns until they are institutionalized. It costs $9,000 a year to keep a child in an institution in Washington. **I am sure it would cost considerably less to fund an adequate program in each school district for discovery and treatment of children with learning disabilities.**

Putting all the dollar figures aside, if we can prevent or alleviate the suffering of thousands of children and their parents, if we can prevent delinquent and incorrigible behavior, if we can stabilize the lives of these children and make them productive citizens; can you think of a better way to invest our time, energy and talents? I cannot.

A Hard Row to Hoe

by: Ruth Edington

The (Adolescent) with a Learning Disability

The teenager with moderate to severe learning disabilities whose intellectual capacity is within the normal range has "a hard row to hoe" in his regular grade placement. School services for his specific needs are hard to find in all too many parts of the country. Also, skilled tutors are rare. Unlike the learning-disabled teenager who functions in the bright and superior intellectual range, his less able counterpart possesses fewer compensatory mechanisms for coping with academic and social expectations.

The teen years are replete with adjustments the individual must make to his environment. To be "well adjusted" is difficult enough for any young person; but the further crippling complication of specific learning disabilities makes the teenager's life with himself, his peers, and significant adults frustrating and bewildering. If these adults could and would concentrate on providing him with the skills he needs to survive in his environment, his daily life would be much more satisfactory. In addition, he should not be expected to achieve far above what he can produce successfully despite his average range of intellectual functioning. For him, college is likely to be just another source of failure, frustration, and rejection. It is more probable that he will leave school as soon as he is legally able, if not before, to look for a job-to survive. To do this, the basic elements for survival are the learning skills needed. These skills could be made more palatable by presenting them at his interest level, regardless of the lower academic demands for success.

His survival needs are found in the use and understanding of language, arithmetic, and social skills suitable for the interpersonal relationships of the workaday world. Language usage skills undergird the other areas. Language training in reading, writing, and spelling still may require directed training free of elaboration at the abstract levels suitable for his age-mates.

In the area of language training he needs to be able to:

1. Write consistently and legibly his name, address, phone number, date of birth (and/or age), parent or guardian's name, address, and phone number, as well as those of previous employers, if any.
2. Match accurately letters, words, and numbers in a series e.g. checking orders and invoices.
3. Copy legibly and accurately at near-point copying tasks, e.g. sales slip items.
4. Recognize the meaning of survival words, such as traffic signs, parking limits, danger warnings, exits, rest room, etc.
5. Take directions and follow them, either as demonstrated or as given orally, commensurate with his age.
6. Use spoken language with reasonable syntax and the jargon needed for his vocation, and
7. Type accurately from copy, if incoordination and tension do not interfere with his achievement. Touch typing should be stressed and speed de-emphasized.

In arithmetic, the language of quantative expression, he should be able to:

1. Write numerals and common signs, such as decimal point, cent and dollar signs clearly.
2. Grasp and use simple basic arithmetic operations, even if these problems must be solved mechanically

and in "old Math" language.

3. Use ordinal numbers reasonably well, e.g. fifth floor or fifth row down.
4. Understand and correctly use common fractions e.g. adding and subtracting with common denominators.
5. Recognize coins and paper currency by name (if not value system), or at least by color, design, and size combinations necessary to ride the bus, buy lunch, etc.
6. Recognize time (clock or watch) to the hour, half, and quarters, even if these cannot be named, for getting to work or school, lunch, resuming work, going home, etc.
7. Compare dates expressed in name or number symbols, e.g. 10/9/73 with 9/10/73, in terms of temporal order, and
8. Know simple fractional equivalents, e.g. ½ dollar = 50¢.

The teenager with "a hard row to hoe" often has difficulty relating to peers and/or authority figures in his immediate environment. To the learning-disabled adolescent, the need to develop social skills is critical, yet it is harder for him than for others to obtain social competence. In order to progress, the young person must realize several things about himself in relation to others; first, that the fact of communication is important to his social survival; second, that communication may take place both verbally and nonverbally; and third, that he needs to practice the skills relevant to both forms of communication.

The goal is to be consistently able to communicate:

1. Nonverbally:
   - (a) Practice personal hygiene at an appropriate level
   - (b) Wear vocationally appropriate attire
   - (c) Use reasonably good manners of conduct in social situations
   - (d) Interpret social signals correctly, e.g. bodily stance, facial expressions, and gestures, and
   - (e) Regulate his own bodily stance, facial expressions and gestures.
2. Verbally:
   - (a) Accept directions, orders, and constructive criticism without unsuitable rejoinders
   - (b) Know and use techniques for contradicting authority when need indicates
   - (c) Know and use ways to handle teasing ("keeps his cool"), and
   - (d) Use suitable vocabulary in varied situations, e.g. on the telephone, around home, with peers, in work areas, in recreational places, etc.

Needed skills should be systematically evaluated and gaps should be carefully filled in. Teachers may use these listings for devising individual evaluations both formally and informally. Too, they will delete or elaborate items when needed, to account for regional and cultural differences as well as those in age and grade levels.

A Short But Useful Bibliography for Teachers of the Adolescent Slower Learner

Ken Weber

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VII. Administrators, Coordinators, Principals Where Can I Find Help?

At the district level consultation is available on approval request procedures from the Ministry of Education, Science and Technology's Special Programs Branch. In addition, Ministry personnel are familiar with programs operating in all school districts. They can suggest models and refer you to an appropriate district for observation and consultation. The diversity of population, location and personnel has helped develop a wide variety of models within the province. By visiting programs and talking to the administrators involved you will obtain practical data for your plans and decisions. Materials developed by some districts for administrative use are listed in this volume under Materials from British Columbia School Districts.

Job descriptions of coordinators or supervisors of special programs vary with each district's philosophy and needs. Many small districts have assigned this job along with many other duties to elementary supervisors or directors of instruction. People given this responsibility often do not have a background in special education or exceptional children.

The first priorities should be to read some professional publications and observe programs operating in your district. Find out what other teachers are doing. Contact the Ministry for names of resource people near you who can explain their programs. Each University in British Columbia offers courses in Special Education. Conferences, Institutes and Professional Development are announced by the British Columbia Teachers' Federation Professional Development Division and circulated throughout British Columbia by letter or through advertisements in professional journals. In addition many publishers will provide resource people and workshops to demonstrate their materials.

Other professionals can give you information about services for exceptional children. Doctors, nurses, psychologists, social workers and fellow administrators can give you information on their roles and the support services available from their profession.

Under the auspices of the Inter-Ministerial Youth Committee, local child-in-crisis committees and their regional counterparts are available to extend help and solutions for problems that require more assistance than school staff can provide.

The organizations listed in the appendix can give you materials and information.

Information is available but you must set aside time to pursue it. As mentioned in the introduction, there are many philosophies, methods and materials available. The careful administrator will need time to explore the areas of special education and exceptional children from a variety of viewpoints before he can develop a personal philosophy for planning and organization.

How Can I Plan For Services?

The Ministry of Education, Science and Technology's Special Programs Branch, publishes "Guidelines" each year for special education programs. This publication can help with initial planning. A needs survey is necessary to identify seriously handicapped children. Information about personnel and facilities is also needed.

What Support Can I Provide?

Administrative support at the school and district level is necessary. Teachers cannot work in isolation. They need a principal who knows what is happening in their classrooms, who understands their frustrations and provides encouragement. Jerry Baughman, a principal, has written an article, *The Principal's Role in the Education of the Child with Learning Disabilities*, which is included in this section.

School District No. 88 (Terrace) has designed three instruments for data collection on their special services which are also included. The *Education Program Planning Model* systematically organizes objectives and goals. The *Program Evaluation Form* provides data for an ongoing system in specific special services programs. Parker's *Evaluation of the Role of Supervisor of Special Services: Learning Assistance Programs* describes the administrative role as perceived in one school district.

The administrator should take responsibility for a public relations program about the special services available for exceptional children in the schools. He should be aware of other public and private services available. He will often be required to answer parents questions and to counsel them. He should keep himself informed about programs, services and alternatives.

The Principal's Role in the Education of the Child With Learning Disabilities

by Mr. Jerry Baughman, Principal, Hilltop School, Ladue and Member of the Professional Advisory Board, Missouri ACLD

One fact that seems generally accepted in education today is the recognition that any educationally significant change that occurs in the life of a child, emanates from the building level. "The key unit for educational change is the individual school with its principal, teachers, students, parents, and community setting," Dr. John Goodlad. If significant change occurs mainly at the building level, then the role of the principal is an important one. The role of the principal embodies at least three key elements: 1) he must see the total picture educationally (each teacher is a specialist); 2) he helps set the tone within the building, i.e., what is emphasized, etc.; 3) he helps establish priorities, i.e., how much time, effort, and money are expended.

In order for the principal to function most effectively in his role, continuous dialogue (meaningful discussion at the faculty level) must be maintained within a building. Only the principal is in a position to maintain dialogue within a building. A teacher may introduce a topic but she is not in a position to maintain the necessary dialogue to carry the idea to a logical conclusion. The principal in his role may occasionally make a "major" presentation to the staff, stating a position as a point of departure for further discussion. From discussions such as this evolves a common (mutual) philosophy within a building. "Philosophy as used here is intended to mean a value structure (basis) from which decisions are made. The dialogue leading to a common philosophy should deal with such questions as these: what are we trying to do for children, what are we trying to accomplish with children; what skills should we teach: what attitudes do we want to develop, what values do we want to transmit (yes, values.) (If any of the above questions make the educator shy away, then he has his work cut out for him. We are providing answers to all the above questions, either by design or by default.) Pursuing such questions causes a staff to continually define and redefine their task — and it is not a stagnant one.

A philosophy which benefits the learning disabled child is a philosophy which is committed to meeting the **needs** of all children regardless of levels of achievement. Dr. Margaret Mead has stated that alienated people are very dangerous — and we certainly don't need more alienated people. We should implement a philosophy which is committed to helping each child develop a positive self-image, a feeling of worth. We must help each child have success. In other words, we must help each child develop a belief that he can cope with most of the demands that will be made on him. The learning disabled child will not stand out if we implement this philosophy.

Let's deal with some basic things in meeting the needs of learning disabled children. How do we help a child build a positive self-image, a feeling of worth, a feeling of success? By treating him as though he were competent, as though he had worth, and with dignity. Is this done by sending him to a special school or a special class? NO. It is more apt to be done by keeping him in the mainstream, if possible. (There are exceptions, of course.) Deciding to keep a learning disabled child in the mainstream of education is a very basic decision.

Assuming that the learning disabled child is in the mainstream of education, let's look at priorities. If the child is in a class of 35 (approx.), then a top priority for the principal is the reduction of class size. He'll have to use whatever leverage he can to do this. A couple of alternatives are to use paraprofessionals to reduce the child-adult ratio, and to use older students to help.

Next priority. Teachers don't recognize LD children? Have in-service workshops to provide information. Make certain that the identification of the LD child is done in behavioral terms. It is not particularly helpful to the teacher to have the LD child identified in terms of etiology, i.e., brain injury, brain damage or minimal cerebral dysfunction. It is more helpful to have the child identified in terms of perceptual handicap, conceptual disorder, or reading disability.

Let's move to the classroom. The top priority within the classroom is to structure success for the child. This is his basis of security. We all — big and little — operate effectively only from a basis of security. Priority: Eliminate arbitrary grade level demands for these children. Question: Will a 4th grade child willingly read a primer? Answer: Yes, when he sees it in terms of the **Task** to be performed. Teacher: "Would you like to have me help you learn to read this year? In order to do that we'll have to begin with this book. We'll move through it as quickly as we can, but I'll be happy to help you learn to read."

Classroom teacher. Observe individual children carefully. Begin to identify what an individual child can do, and what he cannot do. Jot down your observations. Teach according to what you observe. A child can never follow oral instructions? Then give them to him in written form. A child can never get information accurately from the chalkboard? Then give it to him by some other means. A child mixes up multiple directions? Then give him directions one step at a time.

Basic to the above classroom illustrations is the fact that the teacher must operate this way with all children. E.g., she cannot have just one child reading below grade level.

Another important facet in the life of the LD child is the need for a minimum of **ability** grouping in the classroom. If you want to do something **immediately** for the LD child, do away with the traditional three reading groups. This labeling practice is so insidious because it is done daily in full view of the class. Six years of "low group" will convince most any child that he belongs to life's "low group." The teacher doesn't know any other way to teach reading? Priority: let her visit a class where reading is taught individually, or by some other approach. Questions: Does this mean there should be no grouping in the classroom? Not at all. In fact, the ability to work as part of a group is a very important skill. Group for skill teaching, but let the groups shift according to the skill being taught; group for special interests, etc. Just don't make grouping a **degrading** experience.

Just as with ability grouping, the LD child needs a minimum of labeling. Labeling a child helps only if it leads to a course of action. Unfortunately, we have few labels which lead directly to a course of action. The label might help if it causes the teacher and/or parent to "get off the child's back." Otherwise, the label will probably work to the child's disadvantage.

Evaluating and reporting pupil progress. The LD child does not need labels such as "D" (poor) and "F" (failure). He and his parents need a behavioral description of what he can do and what he can't do, with emphasis on what he can do. Remember the observations the teacher jotted down? These become the basis for reporting to parents, either in conference or in written form — or both. Priority: Teachers need training in how to do this; they also need time to do it.

Role of other teachers in the building, such as art, music, and P.E. The principal needs to take the initiative in setting up staffings on each LD child to see that uniform demands are made by all teachers working with a given child. Also, the principal needs to convey the premise that these areas (art, music, P.E.) can provide special avenues of success for the LD child.

Role of the special teacher, or LD teacher. The principal needs to be careful not to oversell the role of the specialist to parents and to others. Remember the case of reading and the remedial teacher? Despite the advent of the remedial reading teacher, we still have reading problems. Thus will it be with the LD teacher, so don't put her in an untenable position. As for her work, it should relate as closely as possible to the classroom. In fact, if room permits, let her work in the classroom. She may want to work with several children in the classroom before identifying with a specific child in the room. Let her use as many regular classroom resources as possible. In the final analysis, the child equates success with the ability to function effectively in the classroom (i.e., with his peers.)

Sometimes for the sake of the LD child, and for everyone concerned, he needs to be placed in another homeroom. He may need a different climate, and an opportunity to break old patterns of behavior. Changing the room assignment of a given child will **not** result in "everyone" wanting to be changed. The placement of a child is a matter of professional judgment. The principal needs to exercise his professional prerogative.

The principal and discipline of the LD child. The LD child needs discipline in the sense that he needs to learn that there are limitations and restrictions on his behavior. Concomitant with that, he also needs a sense of compassion. Interestingly enough, the principal may need to serve as a buffer for the LD child. When his classroom teacher — and perhaps his classmates — have become exasperated with him, he may need "a friend in court." The principal is the one who may have to help him analyze a given situation, and help him identify an acceptable way to respond. He may be able to help the child learn to avoid frustrating situations, when possible, such as on the playground. The principal will also have to observe behavior, i.e., what discipline is effective, and what discipline is not. Above all, he will need to work with the child's parents — so they don't work against him.

Communication within the building and between buildings. In order to save wear and tear on the LD child, the principal needs to be certain that we don't "re-invent the wheel" every year. The principal, or someone designated by him, needs to transmit to the next teacher what has been learned about how to work with the LD child. This is true within a building as well as from elementary to junior high, etc.

Summary. The principal needs to help create a philosophy and climate in which the LD child does not stand out. The focus needs to be on meeting basic needs of success and security. Incidentally, everything stated here is appropriate for any child.

Educational Program Planning Model

R. Parker
School District #88 (Terrace)

A. DECISION OF WHO SHOULD BE INVOLVED AND AT WHAT STAGES IN THE PROGRAM PLANNING PROCESS:

I. Identify Education Needs:

II. Specify Program Objectives:

III. Specify System Goals:

IV. Evaluation of Existing Relevant Programs:

V. Identify Constraints to Program Development:

(a) Time:

(b) Money:

(c) Staffing:

(d) Staff Skills:

(e) Political Environment:

(f) Attitudes:

(g) Physical Environment:

VI. Identify Program Alternatives:

VII. Evaluate and Prioritize Alternatives:
(Consider effect on other programs and on total system)

VIII. Specify Program or Procedure:

IX. Specify Budget, Staff, Physical Space, Equipment and Materials Requirements:

X. Specify Existing Resources Useful in Program Planning and Implementation:

XI. Specify Short and Long Term Effect on Other Programs and Total System:

XII. Specify Program Management System:

XIII. Specify Program Supervision System:

XIV. Specify Program Evaluation Tools and Procedures:

XV. Specify Time-Line for Implementation:

XVI. Specify Required Policy Changes:

XVII. Specify Required Publicity and Public Relations:

Program Evaluation Form

R. Parker
School District #88 (Terrace)

Name of Program: ____________________

Location of Program: ____________________

Date Program Began: ____________________

Date Program Ended ____________________
(if appropriate)

Name of Evaluator (Your Name): ____________________

of: ____________________
(Organization or Agency)

I. What were the broad goals (in general terms) which you hoped to meet through this program?

Goal A: ____________________

Goal B: ____________________

Goal C: ____________________

II. What were the MORE SPECIFIC objectives which you hoped to accomplish through this program?

OBJECTIVES WHICH YOU HOPED TO ACCOMPLISH **WHILE** THE PROGRAM IS **ON-GOING:**

Objective 1: ____________________

Objective 2: ____________________

Objective 3: ____________________

Objective 4: ____________________

OBJECTIVES WHICH YOU HOPED FOR OR **BY THE END** OF THE OPERATION OF THE PROGRAM:

Objective 1: ____________________

Objective 2: ____________________

Objective 3: ____________________

Objective 4: ____________________

III. Were each of the above GOALS and OBJECTIVES met fully or in part? (Use check marks below.)

Goals & Objectives	Not Met	Only Minimally Met	Largely Met	Fully Met
Goal A:				
Goal B:				
Goal C:				
ONGOING OBJECTIVES:				
Objective 1:				
Objective 2:				
Objective 3:				
Objective 4:				
END OF PROGRAM OBJECTIVES:				
Objective 1:				
Objective 2:				
Objective 3:				
Objective 4:				

IV. How did you measure or evaluate whether goals and objectives you set were met (in full or in part) or not? (Your measurement method might include: verbal reactions of students or instructors, test scores, school marks, attendance, policy records, changes in family structure, community participation, parent's reaction, questionnaires, etc.)

Goals and Objectives	How you Measured Whether They Were Met
Goal A	
Goal B	
Goal C	
Ongoing Objectives:	
Objective 1	
Objective 2	
Objective 3	
Objective 4	

End of Program Objectives

Objective 1: ____________________

Objective 2: ____________________

Objective 3: ____________________

Objective 4: ____________________

V. Please describe any outcomes of this program which you DID NOT set as goals or objectives and DID NOT anticipate (both good and bad):

Favourable Outcomes (not anticipated):

Unfavourable Outcomes (not anticipated):

VI. What have been the major difficulties this year in getting the program to operate smoothly and successfully?

VII. What could be done in the future (or has already been done) to remedy these difficulties (if a remedy is possible)?:

VIII. Would you recommend that this program continue for another year?

YES ☐ UNDECIDED ☐ NO ☐

IX. If you marked "Yes" or "Undecided" in VIII above, what changes or improvements should occur in the program during the next year?:

X. Please attach any letters, data, questionnaires, scores, attendance information, etc. which would help the School District to fairly evaluate the operation of the program thus far.

Evaluation of the Role of Supervisor of Special Services

R. Parker, School District #88 (Terrace)

Please rate the activities of the Supervisor of Special Services by circling one of the following numbers:

1	2	3	4	5	(6)
EXTREMELY HELPFUL	QUITE HELPFUL	SOMEWHAT OR SOMETIMES HELPFUL	ONLY OCCASIONALLY HELPFUL	RARELY OR NEVER HELPFUL	NOT APPLICABLE OR DOES NOT OCCUR

A. Demonstrating teaching or counselling techniques by working with individual children or groups of children.

1 2 3 4 5 (6)

B. Suggesting, providing, or explaining materials needed by the L.A.T.

1 2 3 4 5 (6)

C. Assisting with test administration & interpretation, diagnosis & prescription for individual children.

1 2 3 4 5 (6)

D. Assisting with grouping children and scheduling time, including when to begin & terminate learning assistance with a child.

1 2 3 4 5 (6)

E. Suggesting & helping with different roles or modes of operation for the L.A.T. within the school.

1 2 3 4 5 (6)

F. Assistance in contacting and acquiring prompt service from some other agencies or other Special Services staff (e.g. psychologist, speech pathologist, itinerant teacher of deaf, etc.)

1 2 3 4 5 (6)

G. Giving feedback after observing and evaluating sessions conducted by the L.A.T.

1 2 3 4 5 (6)

H. Consultation with the school principal and with other school staff regarding the learning assistance role or programme.

1 2 3 4 5 (6)

I. Acting as go-between or intermediary between the L.A.T. and the principal or other school staff over sensitive matters.

1 2 3 4 5 (6)

J. Conducting formal in-service sessions.

1 2 3 4 5 (6)

K. Providing administrative support for: professional development, data collection, placement of child in special class or school, promotion or demotion of a student.

1 2 3 4 5 (6)

L. Providing information and examples from other L.A. programmes encouraging communication among elementary L.A.T.s.

1 2 3 4 5 (6)

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Reynolds and Birch, *Teaching Exceptional Children in All America's Schools: A First Course for Teachers and Principals.* Reston, Va: CEC, 1977.

Wirtz, M.A. An Administrator's Handbook of Special Education. Springfield, Ill.: Charles C Thomas, Pub., 1977.

What Do I Tell My Child?

Above all be honest. Few children are unaware of their problems. It is the parents' role through observation and assessment procedure to help explain what is happening. An optimistic, positive parent can provide support and information that will help the child deal realistically with his problem. Your child's questions about his disability need to be answered. The clarification of confusing professional opinions is important information for the older child.

Readings

The readings that follow were made available by the Association for Children with Learning Disabilities. They represent the kind of positive support available for parents from this association. They contain specific suggestions about what to look for and how to seek help.

Assessment Guidelines For Parents

1. To eliminate any physical disability make sure your child has:
   (a) a complete medical check-up by a family doctor or paediatrician.
   (b) a complete eye examination by an opthamologist (you may have to ask for the more specialized tests such as spacial, perception, color blindness).
   (c) a proper hearing examination.
2. When an assessment has been suggested by the school or initiated by the parent(s) meet with the principal and teacher to:
   (a) make sure you understand what an assessment is.
   (b) find out who will be administering the assessment.
   (c) indicate your willingness to be involved.
3. Once you have given permission for the assessment it is advisable that the parent(s) confer with the psychologist to give him or her a home picture of the child and other information which might be pertinent.
4. Samples of questions to ask once the assessment has been completed:
   (a) what type of tests were used?
   (b) what was the purpose of each test?
   (c) how was the child while being tested?
   (d) how many times was the child observed?
   (e) what are my child's strengths?
   (f) did the tests show how my child might be better taught?
   (g) in what way did they show?
   (h) what will happen now?
   (i) will the recommendations go to the principal? teacher?
   (j) may I have a copy of the report?
   (k) will I be able to be involved with the planning of my child's educational program?
   (l) what can I do to help my child at home and at school?
5. Have the psychologist explain point by point the results of the assessment in language you understand.
6. Acting upon recommendations from the assessment team the teacher(s) will have the responsibility of implementing a program. It is very important that the teacher(s) and parent(s) work closely together to ensure continuity. Ask if the program will be flexible to meet the needs of the child.
7. Determine a date for follow-up interview to see whether the program is working.

Reference: Cowichan Valley ACLD

8. Parents

VIII. Parents How Do They Tell?

This section contains typical material used by parents who are concerned about the apparent discrepancy between their child's ability and performance.

Most parents are aware when their child is not doing as well as expected or has become frustrated. There are many checklists available to help parents observe and quantify a child's behavior. The best known, from the New York Institute, is included in this section. The author cautions that these lists contain warning signs that **might** indicate a problem.

Often teachers will alert parents of a child's problem and request a physical examination with careful attention to hearing and vision tests.

Children themselves may be able to articulate the frustration of not being able to do what others are doing.

It is important that your concerns be discussed with the professionals that have dealt with your child and have a frame of reference in child development and expectations. Teachers and doctors who know your child should be asked to observe them and collect information. Parents too have a responsibility to keep records and observations. Samples of behavior, art work, activities and other childhood production can help professionals to assess your child.

Do not be afraid to ask for the qualifications of the person who assesses your child and ask too what you can do to help with the diagnosis.

Who Can Help?

The most important person to provide help? Yourself! When problems are suspected or diagnosed a positive, optomistic attitude is the best help. As Margie Golick of Montreal Children's Hospital comments in her presentations "Learning Disabilities are not the end of the world . . . just a pain in the neck".

Parents need support and the Association for Children with Learning Disabilities (ACLD) has national and local chapters throughout North America. They are listed in the appendix under organizations. These chapters can provide the support of others with similar problems. They share information, sell books and hold public informational meetings.

Concerned professionals are available to help children and their parents. Teachers, administrators, doctors, nurses, social workers and psychologists are all working on the puzzle of the learning disabled child. They can provide suggestions for activities, diet, socialization and remediation.

Publishers (listed in the appendix) have materials and books for parents.

Guidelines For Parents, Teachers and Volunteers

by Barbara Reid, B.Sc.N.

1. Positive Attitude

Your positive attitude will be passed on to the child. Emphasize what he **can** do, not what he cannot — he's aware of what he cannot do and has been reminded often enough.

2. Encourage the Child to Complete His Assigned Task

He is apt to say "I don't like to" or "I hate that". This very often means "I don't think I can". If you think he can, bring him back to the task and help him to complete it, whether it be in the gym in the gross motor training programme or in the fine motor and sensory work, etc. If necessary, modify the task so that he can complete it with success.

3. Try to Make Success the Inevitable Result of Each Task Assigned Him

We may learn from our errors, but these children are often in difficulty because they have **not** learned from their errors. They have often repeated their errors endlessly and therefore have merely reinforced their mistakes and have developed habits which do not result in success.

4. Reduce Distractions as Much as Possible

Give him the task and then be **quiet**; give as little extra talk as possible — particularly at first. (Later on you may be working with a child who needs help in coping with distractions and there will eventually be some built into the task — but he first needs distractions reduced.) If the child wishes to chatter, sometimes this is necessary before he can settle down to his task; he needs to tell you something before he can feel comfortable working with you. But **watch for the child who will talk to avoid the issue.** Some have become very skillful at this. Help him to understand that there will be time for talk after he completes his job.

Some children also need that pause after instructions — "for the penny to drop." They are incapable of giving you an immediate response. Give him time to respond. Gradually we will help him to reduce the time involved in his "delayed reaction".

5. Quietly Observe and Support Him But Don't Smother Him

If he feels restricted by your attention or feels that you are not sure whether he can do this job alone, then you are only reinforcing his belief that he is dumb. You insult him by treating him as a baby. At the same time, give him lots of encouragement; too often he has not had enough of this. Try not to become angry or impatient — he needs more approval than usual for a child his age. But your feeling guilty about having become upset in the past will not help either of you. Just start from **now** and forget what you have done in the past.

6. Give Praise — But Only When Warranted

Give him lots of praise **as he earns it** — but be careful. Don't get carried away and tell him he has done a wonderful job when both of you know he has not. Very often, he is capable of assessing his work and seeing his errors. He very often cannot correct these errors, but nevertheless he is aware of them, and is insulted by unwarranted praise.

7. Corrections — When and How

Give the child a chance to find his errors first. It is important that he not practise his errors but it is also important that he feel that he is capable of judging rightness and wrongness too. Such comments (made quietly as he works without jumping at him and pointing to the error) as "Do you think these two are exactly alike?" or "Have a look at the third one again". Often humour is a great relief for these children. Such comments as "I caught you at last!" or "It took a long time for you to make a mistake but I **think** I may have caught you this time", etc. If he cannot see the error readily, draw his attention to the various parts of whatever the task is and by breaking it down in this way, he may more readily see where he has gone wrong.

Do not take his work out of his hands (an insult). Offer help if it appears needed but **give help only if you are sure he wants it.**

Self-correction is built into many of the activities in a learning skills or perceptual motor training programme; e.g., correction sheet which the child puts over his work to check it, or in some cases, you will read instructions to have the child read or say back to you what he has done. He will often spot his errors at this time.

8. If an Activity is too Difficult for the Child

If you can see that he is having a real struggle with a task and is not likely to have success, change it a little. As far as he is concerned, you are making it more interesting for him when in fact you are probably simplifying it. E.g. the child who cannot walk along the walking board; get him to walk along a rope and pretend that he is a circus performer on the high wire.

Pressure will disorganize rather than help him, so encouragement and help, as needed, will produce far better results.

Give him lots of time — he will speed up as he feels more adept.

9. Nearly all games or activities have accompanying instructions. Read these. They may differ from the usual method of play or work, but are designed to teach the child specific skills. If advised by the director of the learning programme to change the instructions, all it is necessary to say to the child is "Today we are going to do it this way". No further explanation or apology is necessary for the child if you change the way some equipment is to be used. After working as per instructions, you will think of new ways to present material to this child — do it!

10. Behaviour

Watch for, and try to prevent, **CATASTROPHIC REACTION** (going to pieces). Once this has occurred, the pressure and frustrations are too much for him to control. If it should occur, quietly hold him and re-assure him (as appropriate) and steer him to something else. Reasoning will usually be to no avail until it is over. He is frightened by his own behaviour and inability to control it, so try to anticipate and prevent this. Extreme stubbornness may be a warning sign. Then some comment such as "I don't think this is a good day for . . . Let's . . ." will relieve the situation.

11. Be Flexible in Your Expectations

His performance will probably vary from day to day — perhaps to an extreme. If he is tired, overexcited, just getting over an illness, having trouble with his allergies, etc. keep to enjoyable (for him) and successful tasks for that day. Winning a game that day may do far more than any specific training you may have planned.

If he **appears** to have forgotten yesterday's work — he **really** may have, or perhaps does not see the connection with today's work — even though it may appear obvious to you.

12. Help the Poor or Slow Reader with Lessons which Require Reading

Read most of the lessons to him (or tape them) if necessary. Parents can help here with subjects such as socials by reading the material to the child at home. In the classroom and at home allowing the child to listen to a tape recording of the textbook as he reads it could make a tremendous difference.

13. De-emphasize Spelling and Writing if the Child is Having Trouble Here

Allowing him to type or tape work or projects when possible will ease the pressure and give you a more realistic picture of this child's capabilities than his written work.

14. Keep Records

Record a child's negative response to some assigned task. Try to assess whether it really is boring for him, as he says; or is it that he finds it difficult and would rather avoid it.

Much of this work is continually diagnostic. E.g. The Visual Memory Tray: If the child cannot remember the objects from looking at them for a "reasonable" length of time, but can if he is encouraged to name them out loud as he looks at them, chances are he learns more through hearing than vision; or through a combination of both seeing and hearing. Note these incidents, and report them to the person who directs the programme so that special planning can be done to build up this child's weaker skills.

15. Safety Rules Must Be Adhered To

Many of the Children will not see cause and effect; their timing may be off; their spatial awareness is off so their judgement of distances will be off, etc.; so **we** have to take responsibility for safety precautions and see that proper spotting is done in the gym. These are the children who are often labelled "accident-prone" — it is part of their disability.

16. Have Confidence in Your Ability to Help These Children

What you are, and how you say it, is far more important than the details of what you say. Your job is to give a child a task he is capable of, yet still challenged; support him

Buy books he **can** read — Mad, comic books.

For the older child tape his texts.

Let him help around the house and yard, e.g.
(a) Kitchen — set the table, prepare simple foods, (soup) roll dough, pour juice, make sandwiches.
(b) have him write lists for the store and shop with you.

Encourage hobbies.

Teach him to play simple games; break down each activity of the game.

Teach the rules of simple games, e.g. soccer, softball.

Encourage other children to play with your child.

Teach him to use the telephone and to take messages.

PRAISE HIM, REWARD HIM AND IGNORE HIS MISTAKES.

Get him to tell you what has pleased him this day. **LISTEN.**

Help him learn to tell time by using T.V. programs.

Money talks — he may learn denominations of money by saving.

Use tracing books, coloring books with a fine motor or eye-hand problem child.

Join an association for children with learning disabilities.

Adapted from Nona Munro, 1972.

Other Materials From the Association for Children with Learning Disabilities

On Being a Parent of a Hyperactive Child

Feelings are a Family Affair

For Parents . . . Helping Your Child at Home with Reading

For Parents . . . Helping Your Child at Home with Handwriting

For Parents . . . Helping Your Child at Home with Spelling.

This Child Belongs to the Parents.

Learning from Living: Games for Your Learning Disabled Child.

Program for Parental Reinforcement of School Work Expectations.

as he needs it; praise him as he earns it; and above all — ENJOY HIM! He will then enjoy himself and gain satisfaction from what he is doing and learning.

Hints for Parents of Learning Disabled Children

Adapted from N. Munro, 1972

List your child's **abilities** and remember to encourage them.

Learn all you can about learning disabilities. Have assessment done if possible — just a beginning. Learn your child's disabilities.

Remember you are dealing with the whole child and not just the disability.

Don't feel guilty; it is not a matter of "fault" or "blame".

Accept and love this child as he is.

For eye-hand problems, buy shoes without laces, clothes without buttons, set clothes out in order at night, put markers in left and right shoes.

Give one order at a time and then be quiet.

Tell him of his problem. Tell the new teacher every year — and the substitute, playground, gym teacher, swimming instructor.

Co-operate with the school — write a note if your child is pleased. Structure his time if he needs it:
(a) same time meals, bed, wake-up and homework.
(b) have a definite place for his belongings.
(c) don't vary routine without preparing child.
(d) cut down on distractions — uncluttered room.
(e) quiet place for homework.

Give short but frequent homework assistance — 5 min. 3 × a day.

Play games with your child; board games, I Spy, dice, cards.

Read to your child.

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VACLD. *He Looks Like Other Kids.* Vancouver: VACLD, 1974.

1. Commercial Materials

Many materials are available for children with learning problems. Publishers respond to teacher and student needs. Teachers in the regular classroom as well as learning assistance teachers have adapted and designed materials for their specific needs. This section contains some of the materials presently available. Teachers are urged to write publishers for information about catalogues and current prices.

Language Arts

Reading

Action Libraries	Scholastic Book Services	High Interest Low Vocabulary Masters/Short Books
Ann Arbor Readers	Ann Arbor Publishers	High Interest Low Vocabulary Readers
Basic Reading & Language Skills	Cinemedia	Kits with Books/ Cassettes Posters & Materials for Small Group (5) Instruction
Breakthrough Readers	Allyn & Bacon	Inner City Themes
Can You Solve It	Ginn & Co.	High Interest Adventure Series
Checkered Flag Series	Addison-Wesley	Readers on Cars, Races, etc.
Corrective Reading	SRA	Workbooks, Tests, & Teacher Materials
Cowboy Sam Readers	Scholars Choice	High Interest Low Vocabulary Readers
Dan Frontier Series	Scholars Choice	Readers
Deep Sea Adventure Series	Addison-Wesley	Readers with High Interest Adventure Stories

Distar Reading Kits	SRA	Basic Beginning Reading
Diversity & Trouble-Shooter	Houghton Mifflin Co.	Workbook Series
Dolch Series Readers	Thomas Nelson & Sons	13 Primary Readers
Flash-X Discs	Educational Developmental Labs	Individual Tachistoscopic with Cards in Math/ Vocabulary
Flight Path to Reading	J.M. Dent & Sons	2 Series with Same Subjects
Grammar Is . . .	Thomas Nelson & Sons	Basic Text for Older Students
Griffin & Dragon Private Readers	J.M. Dent & Sons	32 High Interest Low Vocabulary Readers
Hockey Action Series	MacLean-Hunter	8 Readers with Questions & Activities
I Can Eat An Elephant Series	Hancock House	10 Indestructible Books with 2/3 Syllable Words Graded Difficulty
I Can Read Underwater	Hancock House	10 Indestructible Books for Beginning Readers
Jim Forest Readers	Addison-Wesley	12 Books, Teachers Manual & Questions
Kaleidoscope	Addison-Wesley	8 Paperbacks with Short Stories
Kinder Fun Series	Ann Arbor Publishers	Books with Special Drawings for Visual Configuration
Language Development Reading Program	T. Nelson & Sons	Books, Puppets, Filmstrips, Pictures & Tests
McCall-Crabb Materials	Guidance Centre	Books, Tests & Exercises
Monster Books	(Bowmar) Thomas Nelson & Sons	2 Sets of Readers with Guides
Morgan Bay Mysteries	Addison-Wesley	Book-Length Suspense Stories
Open Door Books	Scholars Choice	Autobiographies of Minority Group Members
Pal Paperback Series	Ginn & Co.	High Interest Low Vocabulary Books
Pilot Libraries	SRA	5 Kits with Stories, Records, Teachers Handbook
Pine Mountain Adventure Series	MacLean-Hunter	Readers About Skiing
Pioneer Series	Scholars Choice	Readers
Primary Grades Language Arts	Cinemedia	8 Filmstrips/Cassettes Spirit Masters — 8 Science Stories
Primary Phonics Series	Educators Publishing Services Inc.	Small Booklets
Reader's Digest Skill Builders	Reader's Digest	Stories with Follow-Up Questions
Reading Ideas	Center for Human Development & Research	Idea Book for Teachers
Reading Incentive Program	Thomas Nelson & Sons	High Interest Books on Cars, Motorcycles, etc.
Reading Tasks	Center for Human Development & Research	Sequential Reading Instruction

Sailor Jack Series	Scholars Choice	Readers
Sea Hawk Readers	J.M. Dent & Sons	10 Readers About Teenagers
Search Books	Thomas Nelson & Sons	12 Easy Reading
Schoolhouse	SRA	Complete Word Attack Program
Space Age Books	Scholars Choice	Readers
Specific Skill Series	Barnell-Loft Ltd.	Exercise Workbooks
Sport Action Skill Reading Project	Van-Nostrand Reinhold	High Interest for Junior Secondary
SRA Grammar A	SRA	Skills Kit for Intermediate
Stott Kits	Gage Educational Publishing Ltd	Games & Activities with Guides
Teaching Box	Educators Publishing Service Inc.	Basic Phonic Program
Thinking & Writing	Holt, Rinehart & Winston	Workbook
Time Machine Series	Addison-Wesley	Leonard Stories/Records with Vocabulary Lists
Trend Books	Ginn & Co.	25 Paperbacks about Australia
Venture Libraries	Thomas Nelson & Sons	3 Levels of High Interest/ Low Vocabulary Paperbacks — 60 Titles
Verbs, Verbs, Verbs	Dormac Publishing Co.	Special Designs in Kit
Wildlife Adventure Series	Addison-Wesley	High Interest Low Vocabulary Readers
Wise Owl	Ideal/Moyer Vico Ltd.	Task-Cards of Reading Skills
Words in Colour Program	Educational Explorers Ltd.	Special British Material
World of Adventure Series	Scholars Choice	Readers

Language

Distar Language Kits	SRA	Complete Program for Oral Language
Fokes Sentences Builder Kit	Ginn & Co.	Manipulative Cards & Manual
Goldman-Lynch Sounds & Symbols Development Kit	Psycan Ltd.	Activity Based 64 Lesson Program
Language Stimulus Programs	Thomas Nelson & Sons	Book, Kits & Guides on 6 Themes
Peabody Language Development Kits	Psycan Ltd	Complete Programs with Cards, Tapes, Puppets & Activities

Spelling

Continuous Progress in Spelling	Economy Company	Kit, Workbooks & Tests
Dr. Spello	McGraw-Hill Ryerson	Phonics Book with Workbook
Morphographic Spelling	SRA	Daily Lessons for Intermediate & Secondary Students
Spelling Word Power Laboratory Series	SRA	4 Kits for Independent Use
Teaching Spelling Ves Thomas	W.J. Gage Ltd.	Teacher's Book of Techniques

Writing

Creative Growth in Handwriting	Zaner-Bloser	For Children with Normal Ability in Writing Skills
Cursive Letters & Numbers	Milliken Publishing (Associated Audio-Visual)	Book of Stencils Suitable for Review of Letter Forms
I Can Write Books	Dormac Publishing Co.	6 Books of Programmed Instruction
Johnson Handwriting Programme	Educators Publishing	Good Sequence of Instruction for Children with Mild Problems in Learning Cursive Writing
Learning About Writing (cursive) Learning About Handwriting (manuscript)	Frank E. Richards Publishing Co. Ltd.	Slow Review of Skills
Learning to Write Book I and II	Educators Publishing	Book I — Pre-Writing Exercises Book II — Guide for Teachers Presentation for Children with Writing Problems
Look and Write	McGraw-Hill	Practice in Manuscript Printing — Workbook Format
Lunchbox Handwriting Kits	SRA	Cards, Overlays & Guides Cursive/Manuscript
McLean Method of Writing Writing	W.J. Gage Ltd.	Sequence & Methods for Teaching Writing to Children with Normal Skills
Name Writing	SRA (Hubbard)	Sequential Program Includes Stencils
Writing Manual for Teaching the Left-Handed	Educators Publishing	Teacher's Guide & Exercises

Math

Arithmo	Thomas Nelson & Sons	8 Card Game Kits
Centimetre Rods	Addison-Wesley	Colour Rods & Manual
Centimetre Rod Activity Card Kit	Houghton Mifflin Co.	Activities & Teacher Materials
Deal Me In! by M. Golick	Quebec Association for Children with Learning Disabilities	100 Different Card Games for Classrooms
Distar Math	SRA	Programmed Math on Three Levels
Elementary Math Program	Cinemedia	20 Filmstrips with Teachers Guide & Activity Material
I Can Arithmetic Program	Special Child Publications	Worksheets Teacher Materials
Learning Math Precisely	Center for Human Development & Research	3 Programmed Workbooks
Math Basics	Cinemedia	Cassettes & Activities for Manipulation
Moving Up Numbers	Developmental Learning Materials	Kit of 7 Units for Practice
Practical Mathematics in Metric Form	Development Learning Materials	Student Cards with Activities

Problem Solving Kit (for Calculators)	SRA	Complete Kit for 35 Students
Programmed Math	McGraw-Hill Ryerson	Complete Program
Real Life Math	SRA (Hubbard)	Complete Activity Program Including Posters, Cassettes & Skill Books
Telling Time	SRA (Hubbard)	Teachers Guide, Workbooks & Games
Think Lab 1	SRA	4 Copies Each of 125 Problem Cards & Progress Records
Think Lab 2	SRA	4 Copies each of 145 Different Problem Cards, Manipulatives, Brainstorming & Progress Records
Using Your Calculator	SRA	32 Page Workbook
Veritech Math	Louise Kool & Son	Puzzles, Box & Workbook

Science

Earth History	SRA (Hubbard)	Guide, Models, Tapes & Students Materials
Elementary Science Series	Cinemedia	Sound/Filmstrip Series — 48 Different Titles, 9 Series
Junior Science Books	Thomas Nelson & Sons	8 Science Readers
Landforms	SRA (Hubbard)	8 Models, Guide & Student Materials
Me Now	SRA (Hubbard)	4 Unit Program of Life Science Guides/AV Equipment & all materials
Me and My Environment	SRA (Hubbard)	3 Unit Science Program Guides/AV Equipment Materials
Rock Cycle	SRA (Hubbard)	Guide, Models, Samples & Student Materials
You Can Make It Books	Thomas Nelson & Sons	Craft Books Without Words

Perceptual

Auditory Perception Training Program	Developmental Learning Materials	Masters, Tapes, Activities & Guides
Dubnoff Program	Teaching Resources Thomas Nelson & Sons	III Fine Motor Exercises
Look, Listen, Discover	Cinemedia	Set of 12 Filmstrips/ Cassettes on Divergent Thinking, Ordering, Reasoning/Deducing, Classification & Remembering
Loops to Learn By	National Film Board	30 Film Loops
Play the Perceptual Motor Way by J.V. Ackerman	Special Child Publications	90 Page Activity Book
Visual Motor Perception Teaching Program	Teaching Resources Thomas Nelson & Sons	Games/Puzzles, Cards & Teacher's Guide

Socials

British Columbia Map Game	Center for Human Development & Research	Large Washable Map & Cards
Hello! Getting Together with the Telephone	Cinemedia	4 Filmstrips/cassettes

Canadian Multi-Cultural Heritage	Cinemedia	6 sets of Filmstrips/ Cassettes — Discovery to Modern Transportation
Career Exploration Series	Cinemedia	132 Filmstrips 22 Sets of 6
Community Close-Ups	Cinemedia	10 Filmstrips/Cassettes Stresses City Life
Travelling Sound to Sound	Cinemedia	5 Filmstrips/Cassettes Sound & Music for Creativity
Why Do We Have Laws	Cinemedia	4 Filmstrips/Cassettes Canadian Law
Affective		
Developing Understanding of Self & Others	Psycan Ltd.	Two Levels with All Materials for Sequential Program — Puppets, Tapes, Charts & Cards
Feelings	Cinemedia	8 Filmstrips & Student Activity Materials
My Friends & Me	Psycan Ltd.	Group Activities for Pre-School
Parents Magazines Filmstrips	G.L.C. Publishers	Filmstrip/Cassette Series Children with Handicaps — What Do I See When I See Me — Children in Crisis — The Effective Parent
Peek — Peabody Early Experiences Kit	Psycan Ltd.	Activities for Cognitive, Affective, & Oral Language Development 2-4 Year Olds
Proud To Be Me	Center for Human Development & Research	Book for Positive Social Skills
Toward Affective Development	Psycan Ltd.	Complete Program, Cards, Cassettes, Charts & Activity Sheets
I Can — Special Education Physical Education Program	SRA (Hubbard)	Complete Materials Fundamental Skills — Body Management — Health/Fitness — Aquatics

Testing Materials

Reference: Boeck, D.G. *An Implementation Manual for Resource Room Teachers*. State College, Pa: Model Learning Disabilities Systems, 1975.

Reading

Title—Author—Date	Publisher	Age Range	Description of Test	Scoring
Gate-McKillop Reading Diagnostic Test Gates & McKillip 1926-62)	Bureau of Pubications Teacher's College Columbia University New York, NY 10027	Grades 2-6	Individually administered measure of 28 reading abilities	Yields 28 scores, one for each subtest, norms provided but sophisticated interpretation is required
Durrell Analysis of Reading Difficulty (Durrell, 1937-55)	Harbourt, Brace, and Jovanovich, Inc. 757 Third Avenue New York, NY 10017	Nonreader to sixth grade ability	Individually administered measure of oral and silent reading, listening comprehension, word recognition and analysis, visual memory of word forms, auditory analysis of word's elements and spelling and handwriting	Objective scoring yields grade levels; also included are informal checklists of difficulty and profile chart
Phonics Knowledge Survey (Durkin & Meshouer, 1964)	Teachers College Press 1234 Amsterdam Avenue New York, NY 10027	Grades 1-6	Individually administered (informal instrument) assesses pupil's knowledge of phonics	No norms; checks responses right or wrong
Learning Methods Test (Mills, 1970)	The Mills School 1512 E. Broward Blvd. Fort Lauderdale, FL	Primary Grades	Individually administered measure of ability to learn new words under different teaching procedures	Objective scoring and subjective determination of what method is best for teaching new words. Yields mean scores.
Botel Reading Inventory (Botel, 1961)	Follett Publishing Co. 1010 W. Washington Blvd. Chicago, IL 60607	Grades 1-12	Individually administered, measures four reading levels and selected phonic and related skills	Informal test: standards for interpreting scores are provided to measure appropriate reading level

Gates-MacGintie Reading Tests Gates & MacGintie. 1926-65)	Teachers College Press 1234 Amsterdam Avenue New York, NY 10027	Grades 1-9	Group or individually administered, measures vocabulary, speed and accuracy, and comprehension	Objective scoring, keys provided; yields grade scores but no interpretation of scores to classroom practice is provided
Diagnostic Reading Scales (Spache, 1963)	McGraw-Hill 1221 Ave. of the Americas New York, NY 10020	Grades 1-8 & retarded readers in Grades 9-12	Individually administered, measures words recognition, oral reading instructional level, silent reading independent level and rate, auditory comprehension and six phonics scores	Objective scoring, yields grade levels, but grade norms lack standardization data
California Phonics Survey (Brown & Cottrell 1956-63	McGraw-Hill 1221 Ave. of the Americas New York, NY 10020	Grades 7-12 and college	Group or individually administered using tape; measure of word attack and phonic skills	Objective scoring yields analysis scores on Form I and total score only on Form II
Peabody Individual Achievement Test (Reading Recognition & Comprehension Subtests) (Dunn & Markwardt, 1970)	American Guidance Service, Publisher's Buildings, Circle Pines, MN 55014 (Psycan Ltd.)	Preschool to Adult	Individually administered measure of scholastic attainment in basic skills and knowledge	Objective scoring, yields: grade and age equivalents, percentile ranks, and standard scores
Wide Range Achievement Test, World Recognition Subtest (Jastak & Jastak, 1965)	Guidance Associates of Delaware, Inc 1526 Gilpin Avenue Wilmington, DE	Kindergarten to College	Individually administered measure of letter recognition and pronouncing words	Objective scoring yields raw scores, grade equivalents, percentiles, and standard scores
Gray Oral Reading Test (Gray, 1963)	Bobbs-Merrill Co., Inc 4300 E. 62nd Street Indianapolis, IN 46206	Grades 1-16	Individually administered, assesses oral reading skill and aids in diagnosis of reading difficulties	Objective scoring (time and errors), yields grade equivalents
Gilmore Oral Reading Test (Gilmore & Gilmore, 1951-68	Harcourt Brace and Jovanovich, Inc 757 Third Avenue New York, NY 10027	Grades 1-8	Individually administered, measures accuracy, comprehension, and rate	Objective scoring yields performance rating, stanines, percentile ranks, and grade norms
Woodcock Reading Mastery Test (Woodcock 1973)	American Guidance Service, Publisher's Building, Circle Pines, MN 55014 (Psycan Ltd.)	K-12	Individually administered, measures letter identification, word identification, word, attack, word comprehension, and passage comprehension	Objective scoring; yields grade and age scores, percentile ranks and standard scores, separate norms for boys and girls. Criterion-referenced interpretation of test performance

Arithmetic

Title—Author—Date	Publisher	Age Range	Description of Test	Scoring
Key Math Diagnostic Test (Connolly, Nachtman & Pritchett, 1971)	American Guidance Service Publisher's Building Circle Pines, MN 55014 Psycan Ltd.	Preschool grade 6	Individually administered, measures content, operations and applications in the 14 subtests	Objective scoring; yields grade equivalents; diagnostic profile included
Diagnostic Tests: Self-Help in Arithmetic (Brueckner, 1955)	California Test Bureau 5916 Hollywood Blvd. Los Angeles, CA	Grades 3-12	Individual or group administered; orally administered in part; test covers all areas of fundamental operations with whole numbers, common fractions, and decimals that are taught in grades 3-8.	Objective scoring; no norms; manual provides suggestions for effective use of test results
Peabody Individual Achievement Test, Mathematics Subtest (Dunn & Markwardt, 1970)	American Guidance Service Publisher's Building Circle Pines MN 55014 (Psycan, Ltd.)	Preschool to adult	Individually administered measure of scholastic attainment in basic skills and knowledge.	Objective scoring; yields grade equivalents, percentile ranks, and standard scores

Perceptual-Motor/Visual Perception

Title—Author—Date	Publisher	Age Range	Description of Test	Scoring
Developmental Test of Visual-Motor Integration VMI (Beery & Buktenica, 1967)	Follett Educational Corporation 1010 W. Washington Blvd. Chicago, IL 60607	Ages 2-8	Individually or group administered educational assessment of visual-motor skills (reproduction of geometric forms)	Somewhat subjective — scoring based on guide-lines provided by authors
Developmental Test of Visual Perception DTVP (Frostig 1961-66)	Consulting Psychologists Press, Inc. 557 College Avenue Palo Alto, CA 94306	Ages 3-8	Individual or group administration measures eye-motor coordination, figure-ground discrimination, form constancy, position in space, spatial relations	Objective scoring. Raw scores are converted to scale scores, yields "perceptual quotient"
The Purdue Perceptual-Motor Survey (Roach & Kephart, 1966)	Charles E. Merrill Publishing Company 1300 Alum Creek Drive Columbus, OH 43216	Ages 6-10	Individually administered, purpose being to identify children lacking perceptual-motor abilities	Qualitative scale which designates areas for remediation
Pupil Record of Educational Behavior (Cheves, 0000)	Teaching Resources Corp 100 Boylston Street Boston, MA 02116	Preschool to upper primary levels	Individually administered; measures visual-motor perception, auditory perception, language development, and math concepts	Informal, no norms; yields a profile of student's level and pattern of functioning across basic skill areas
Bender Visual-Motor Gestalt Test (Koppitz Scoring System) (Bender, 1938)	American Orthopsychiatric Association	Normative data from age 5-0 to 10-11	Individually administered measure of visual-motor perception	Designs judged in terms of distortion, rotation, perseveration, method of reproduction, and other factors. Derived scores yield grade equivalents and developmental age
Multiple Choice Bender (Foster & Sabatino) (experimental copy)	Model LD Systems 1247 E. College Avenue State College, PA 16801	Ages 6-11	Individually administered; measures visual discrimination abilities with motoric component eliminated. Two phases of administration allow child to respond more than once to all items missed	Objective Scoring. Raw scores converted into age equiavlent scores or standard scores

Auditory Perception

Title—Author—Date	Publisher	Age Range	Description of Test	Scoring
Auditory Descrimination Test (Wepman, 1958)	Language Research Associates, Box 95 950 East 59th Street Chicago, IL 60637	Ages 5-8	Individually administered; measures auditory discrimination.	Objective scoring; yields age equivalents.
Brown-Carlson Listening Comprehension Test (Brown & Carlson, 1953-55)	Harcourt, Brace and World, Inc. 757 Third Avenue New York, NY 10017	Grades 9-12	Group administered; measures immediate recall, following directions, recognizing transitions, recognizing word meanings, and lecture comprehension.	Raw score is the number right, raw scores converted to standard scores and percentiles, expectancy chart with deviation IQ.
Test of Auditory Perception (Sabatino & Foster, 1974) (experimental copy)	Model Learning Disabilities Systems 1247 E. College Ave State College, PA 16801	Grades K-6	Individually administered (tapes); three subtests measures phoneme discrimination, word recognition, and auditory sequencing.	Objective scoring; yields raw scores and age equivalent scores.
Screening Test for Auditory Perception (Kimmell & Wahl 1969)	Academic Therapy Publications 1539 Fourth Street San Rafael, CA 94901	Grades 2-6	Group or individual administration tape available; six scores: vowels, consonants, rhyming words, sound patterns, word differences, and total.	Objective scoring; yields percentile ranks for age and grade levels.
Kindergarten Auditory Screening Test (Katz, 1971)	Follett Educational Corporation 1010 W. Washington Blvd. Chicago, IL 60607	Preschool to grade 1 grade 1	Group administered; measures auditory figure-ground, sound blending, and auditory discrimination.	Objective scoring; screening device only.

Language/Intelligence

Title—Author—Date	Publisher	Age Range	Description of Test	Scoring
Boehm Test of Basic Concepts (Boehm, 1970)	Psychological Corporation 304 East 45th Street New York, NY 10017	Grades K-2	Group or individually administered; assesses beginning school children's knowledge of frequently used basic concepts (50 concepts tested).	Objective scoring. Caution is needed in interpretation of obtained scores.
Peabody Picture Vocabulary Test (Dunn, 1959)	American Guidance Service Circle Pines, MN 55014 Psycan, Ltd.	Ages 2.5 to 18	Individually administered; measures a child's vocabulary comprehension.	Objective scoring; total score yields percentile rank, mental age or standard score deviation IQ.
Verbal Language Development Scale (Mecham, 1959)	Educational Test Bureau Division of American Guidance Service 720 Washington Avenue Minneapolis, MN 55514	Birth to 15	Informant-interview method used in administration; measures language development.	Scale results expressed as language ages; also age equivalents.
Picture Story Language Test (Myklebust, 1965)	Grune & Stratton, Inc. 757 Third Avenue New York, NY 10017	Ages 7-17	Individually administered developmental scale for written language. Scales measure length, correctness of expression and attempt to measure meaning of the sentence.	Objective scoring by counting and rating; norms provided.
The Coloured Progressive Matrices (Raven, 1965)	H.K. Lewis & Co., Ltd. London	Ages 5-11	Individually or group administered. Non-verbal measure of conceptual reasoning ability.	Objective scoring. Raw scores converted to percentiles.
Slosson Intelligence Test (SIT) for Children and Adults (Slosson, 1963)	Slosson Educational Publications, Inc. 140 Pine Street East Aurora, NY	Children and Adults	Individually administered, verbally loaded test measures intelligence and correlates highly with Stanford-Binet Intelligence Scale.	Most items highly objective; some subjectivity involved with certain verbal response items. Yields MA's which can be used to compute intelligence quotients.

Additional Books of Interest

B.C.T.F. *Resource Guide for Children with Learning Disabilities*. Vancouver: B.C.T.F., 1970.

Belgau, F.A., & Basden, B.F. *A Perceptual Motor and Visual Perception Handbook of Developmental Activities for Schools, Clinics, Parents and Pre-School Programs*. La Porte, Texas: Perception Development Research Associates, 1971.

Carr, W.G.L. *The Medical Practioner and Learning Disabilities*. Vancouver: B.C.T.F., 1973.

Clemons, E. *Language Improves Learning*. Vancouver: VACLA, 1976.

Cratty, B.J., & Martin, M.M. *Perceptual – Motor Efficiency in Children*. Philadelphia: Lea and Febiger, 1969.

Cruickshank, W.M., & Hallahan, D. (Eds.). *Perceptual and Learning Disabilities in Children, Volume 2, Research and Theory*. New York: Syracuse University Press, 1975.

Dreyer, S.S. *The Bookfinder: A Guide to Children's Literature about the Needs and Problems of Youth*. Toronto: Psycan Ltd, 1977.

Heifenbein, L.N. *Perceptual Training Activities*. Cleveland, Ohio: Pupil Services, 1968.

Holte, A.O. *Learning Disabilities and Juvenile Delinquency*. Vancouver: VACLD, 1972.

Hudak, J. *Games and Activities for the Development of Learning Skills*. VACLD, 1972.

Knights, R.M., & Bakkor, D.J. (Eds.). *The Neuropsychology of Learning Disorders: Theoretical Approaches.* Baltimore: University Park Press, 1976.

Leitch, L.J., & Shore, B.M. *Reports in Education: Learning Disabilities.* Montreal: McGill University, 1973.

Nadin, E. *Physical Exercises.* Vancouver: VACLD, 1973.

Polak, E. *Teacher's Aid.* Montreal: Quebec ACLD, 1976.

Steel, D.M. *Dyslexia in British Columbia Schools – 1973.* Vancouver: VACLD, 1973.

Venditti, E.P., & Murray, E. *Motor and Hand Eye Coordination Left to Right Teacher's Guide.* Vancouver: B.C.T.F., 1976.

Von Hilsheimer, G. *Ineffective Nutrition Learning and Behavior.* Montreal: Society of the Emotionally Disturbed, 1971.

Wacker, J.A. *The Dyslogic Syndrome.* Dallas: TACLD, 1975.

Materials from The Association for Children with Learning Disabilities

Causes of Learning Disabilities — The Biomedical Approach

Hyperactivity — sit DOWN darn it!

An Autobiography of a Learning Disabled Child

Have you ever known a perceptually handicapped child?

The Educationally Handicapped

Dyslexia in British Columbia Schools — 1973

He Looks Like Other Kids

2. Materials From British Columbia School Districts

We often find that the most effective methods and materials are available much closer than we thought. The Ministry of Education asked British Columbia school districts for copies of any materials they developed had for learning assistance and exceptional learners. A wide variety of excellent materials was received. The following list, annotated by district may show you that help for your particular concerns is nearby.

A special thank you is extended to the people and districts who took the time to prepare and send this material. Individuals wanting to obtain further information should communicate directly with the district or person indicated.

School District No. 10 (Arrow Lakes)
Gwen Armstrong, Coordinator of Special Services.

LEARNING ASSISTANCE MATERIALS ANNOTATED LISTS
These lists cover primary, intermediate and junior secondary reading. There is also a special section on high interest — low vocabulary reading materials. Spelling, Math — at both the elementary and junior secondary levels, and hardware are also included in these lists. A section on the use of word lists is very practical.

BASIC EDUCATION ENGLISH LANGUAGE SURVEY, FORM I AND II
A complete check of usage in 17 areas from punctuation to spelling and sentence structure.

School District No. 24 (Kamloops)
D.W. Hembling, Family Consultant, Special Services Office.

Peiper, A. "Sleep Needs of Children". *Cerebral Function in Infancy and Childhood.* New York: Consultants Bureau, 1963.

Segal, J. "Childhood Depression". *Chatelaine*, June, 1977.

Bell, G. "Parents who Abuse their Children". *Canadian Psychiatric Association Journal.* Vol. 18, No. 3, June, 1973.

Brown, D. "How to Tell What Type of Parent You are". (No reference available.)

Tucker, B., & Dyson E. "The Family and the School: Utilizing Human Resources to Promote Learning". *Family Press*, Vol. 15, No. 1, March, 1976.

These readings were suggested to help the Learning Assistance Teacher understand a child's performance in both the classroom and on diagnostic tests.

School District No. 27 (Cariboo-Chilcotin)

FUNCTION OF LEARNING ASSISTANCE PROGRAMS IN SCHOOL DISTRICT No. 27
This handout of regulations includes guidelines for teachers, principals and district staff.

PREDICTABILITY AND PROGNOSIS
A single sheet for articulation screening.

SUGGESTIONS TO THE CLASSROOM TEACHER
SUGGESTIONS TO PARENTS
Both materials are excerpted from "Learning Disability" by Margie Golick, Montreal Children's Hospital.

School District No. 31 (Merritt)
Clarence Tiffenbach, Coordinator of Special Education.

LEARNING ASSISTANCE MANUAL
A resource booklet with diagnostic procedures and remedial suggestions in the areas of visual perception, listening skills, word attack skills, vocabulary development and reading.

School District No. 35 (Langley)
Brian Cox, Vision Consultant.

A VISUO-MOTOR DEVELOPMENT SEQUENCE

SPECIFIC LEARNING DISABILITIES IN THE AUDIO-VOCAL MODE

SPECIFIC LEARNING DISABILITIES IN THE VISUO-MOTOR MODE

A DEVELOPMENTAL PHYSICAL EDUCATION PROGRAM FOR KINDERGARTEN GRADE ONE
The materials give rationale for testing and specific suggestions for a wide variety of difficulties. Each suggestion is carefully annotated for use in a developmental sequence.

School District No. 39 (Vancouver)
M. McPhee, Senior Coordinator of Special Education.

SUGGESTED SUPPLEMENTARY MATERIALS FOR LEARNING ASSISTANCE AND LEARNING SKILLS CENTRES, May, 1976
An annotated bibliography arranged by publisher.

School District No. 40 (New Westminster)
Doreen Hoath, Coordinator of Special Education.

NEW WESTMINSTER ELEMENTARY SCHOOLS TEST EVALUATIONS BOOKLET
This booklet follows the format of a very specific *Evaluation Form for Commerciallly Prepared Materials* used by the district. Teachers have taken the time to carefully review the purpose, method and results from each test.

REPORT OF THE COMMITTEE FOR THE GIFTED, May, 1977
This report includes recommendations at the school, classroom and community levels plus well organized checklists for group and individual screening.

School District No. 42 (Maple Ridge)
H.H. Hooge, Supervisor of Educational Services.

SUPPORT SERVICES IN SCHOOL DISTRICT No. 42
A booklet of programs available in the district for all exceptional children. Models for instructional teams, referral procedures and internal school referrals are included.

School District No. 44 (North Vancouver)
Ms. P. Klesner, Queen Mary School.

Sallot, L. "What's wrong with my kid?". *Homemaker's Magazine*, May, 1976.

A good general article for parents and teachers with current Canadian references.

Levin. Learning Disabilities Checklist, 1976. *N.Y. Institute for Child Development*, 36 E. 36th Street, New York, New York 10016.

A set of three lists for Pre-School, Grades 1-8 and High School with a cover statement from Dr. Levin on how to use the lists and what to do with the answers.

School District No. 57 (Prince George)
Wayne Desharnais, Coordinator Active Health/Special Services.

PROGRAM GUIDE — 1977-1978 — SCHOOL DISTRICT No. 57
Contains a description of each program available within the school district. Services are delineated with referral procedures.

MATERIALS OF INTEREST TO COORDINATORS AND ADMINISTRATORS

PROCEDURES FOR REGIONAL TEAMS

INVENTORY LISTS OF EQUIPMENT FOR REGIONAL TEAMS AND LEARNING ASSISTANCE

SUMMER SHORT COURSE SESSIONS AND OBJECTIVES
These materials give the details of the team approach to supportive services. All procedures are specific and materials lists are complete to room furniture and test protocols.

School District No. 61 (Victoria)
Barbara Farquharson, Teacher Specialist, February, 1978.

A RESOURCE BOOK OF LEARNING MATERIALS
An up-to-date guide of materials arranged into sections on reading, spelling, mathematics, junior and secondary learning materials and testing and reference material. Descriptions and ratings are included.

School District No. 63 (Saanich)
Joy Joslin, Learning Assistance Liaison Teacher.

LIST OF DISTRICT RESOURCE MATERIALS AND BOOKS
Behrmann & Millman. *EXCEL: Experience for Children in Learning*. Cambridge, Mass.: Educator's Publishing Service.

A fifty page book of parent directed activities to develop oral expression, visual discrimination, auditory discrimination and motor coordination.

SUGGESTIONS FOR TEACHERS ON THE FOLLOWING SUBJECTS:

Gross Motor Activities
Development of Fine Motor Skills
Sequence of Basic Arithmetic Concepts
Multiplication — A Suggested Teaching Strategy
Basic Facts — Games
Reversals of Letters and Numbers
The Gilligham Approach to Reading and Spelling
Speech and Language Norms
Suggestions to Parents and Teachers Re: Stuttering
Suggestions to Parents Re: Language Stimulation

The above materials are very practical and could be used by regular classroom teachers as well as learning assistance personnel.

School District No. 70 (Alberni)
Jim Felling, Learning Assistance Coordinator.

READING SKILLS CHECKLIST
ALBERNI INEFFICIENT LEARNER SUMMARY
READING LISTS AND GUIDES TO MATERIALS
The above sheets and handouts cover basic learning assistance materials and methods.

Calvin, A.D. "Enter Encoding". *Reading Newsreport*.

Cruickshank, D.E. "Logic in Language". *Language Arts*, 1975.

Cassidy, Jack. "Reading". *Teacher*, January, 1977.

Cassidy, J., & Sharkey. "'Rithmetic Reading". *Teacher*, January, 1977.

Dreikurs, Grunwald & Pepper. "Never Underestimate the Power of Children". *Intellectual Digest*, 1977.

Wells, L. "Puppetry A Classroom Teacher's Point of View". *Insights*, Vol. 10, No. 3, November, 1977.

These readings were suggested for regular and learning assistance teachers to update their information on learning theory and methods to improve teaching.

School District No. 71(Courtenay)
Eileen Gilchrist, Courtenay Junior Secondary.

COURTENAY JUNIOR TUTORIAL PROGRAM: TUTOR'S HANDBOOK
An excellent resource on a secondary peer tutoring program. Contains guidelines and data keeping materials for all aspects of peer tutoring. A resource for teachers of good assessment and teaching practices in any subject area.

School District No. 88(Terrace)
Richard Parker, Supervisor of Special Services.

REMEDIAL READING MATERIALS
(Grades 5-12 from El.Hi. Books in Print Catalogue.)

An excellent resource. Included are publishers, addresses and every title in any series.

PUBLISHERS AND SUPPLIERS OF EDUCATIONAL MATERIALS FOR EXCEPTIONAL CHILDREN
An up-to-date list with Canadian distributors addresses. It includes area of special or remedial education and type of materials each publisher specializes in.

BOOKS FOR TEACHERS AND PARENTS OF EMOTIONAL/BEHAVIOR PROBLEM CHILDREN
An excellent, annotated Bibliography that includes comments and a simple scale, from basic to advanced, that rates the books' practicality and technicality. Books covered are those basic to teacher in-service and home counselling.

LITERATURE ON MENTAL RETARDATION
Annotated bibliography includes cost, audience and general comments on use.

LISTS OF PERIODICALS AND TESTS AVAILABLE IN SCHOOL DISTRICT No. 88
A basic district library list with annotations on quality and use.

AN INFORMAL MATH SKILL INVENTORY FOR GRADE 1 OBJECTIVES
A thorough inventory designed to respond to the British Columbia Math Curriculum Guide. This book contains all the information to use the skill inventory.

SUPPORTING THE MENTALLY RETARDED CHILD IN THE REGULAR CLASSROOM
An excellent resource guide from pre-primary to vocational levels. Suggestions for all subject areas abound. Guidelines for placement and support are included. A good reference for teachers and parents when a regular classroom placement is suggested. This also answers the questions of teachers in rural schools with limited resources.

MATERIALS OF INTEREST TO ADMINISTRATORS AND COORDINATORS
School District No. 88 (Terrace) has developed the following evaluative materials.

EVALUATION OF THE ROLE OF SUPERVISOR OF SPECIAL SERVICES RE: LEARNING ASSISTANCE PROGRAMS

EDUCATIONAL PROGRAM PLANNING MODEL

REMEDIAL TUTOR TRAINING PROGRAM TUTOR EVALUATION

PROGRAM EVALUATION FORM

A BEHAVIOR RATING SCHEDULE INTERPRETED IN DREIKURS' TERMS

PROGRAM INFORMATION FORM TO SURVEY ELEMENTARY LEARNING ASSISTANCE PROGRAMS AND 1976-1977 RESULTS

3. Publishers of Educational Materials

Reference — Publishers and Suppliers of Educational Materials for Exceptional Children (R. Parker, School District No. 88)

Publishers List (B. Farquharson, School District No. 61)

Canadian Publishers *Directory*

Addison-Wesley (Canada) Ltd.,
P.O. Box 580,
36 Prince Andrew Place,
Don Mills, Ont. M3C 2T8

Alexander Graham Bell
Association for the Deaf,
Charles E. Merrill Publishing,
115 Norfinch Dr.,
Downsview, Ont. M3N 1W9

Thomas Alley & Sons Ltd.,
850 York Mills Rd.,
Don Mills, Ont. M3B 3A7

Allyn & Bacon Canada Ltd.,
791 St. Clair Avenue West,
Toronto, Ont. M6C 1B8

American Guidance Service, Inc.,
Psycan,
284 Consumers Rd.,
Willowdale, Ont.

Ann Arbor Publishers,
c/o Mrs. I. Wilson,
#808-17 Lascelles Blvd.,
Toronto, Ont. M4V 2B6

Associated Audio Visual Ltd.,
1590 West 4th Avenue,
Vancouver, B.C. V6J 4W1

Ballantine Books of Canada Ltd.,
5390 Ambler Drive,
Mississauga, Ont. L4W 1Y7

Bantam Books of Canada Ltd.,
#408-60 St. Clair Avenue East,
Toronto, Ont. M4T 1N5

Barnell Loft Ltd.,
958 Church Street,
Baldwin, N.Y. 11510
U.S.A.
(carries Dexter-Westbrook,
and Boning)

Clarke, Irwin & Company Ltd.,
Clarwin House, 791 St. Clair Ave. W.,
Toronto, Ont. M6C 1B8
and
Clarke, Irwin & Company Ltd.,
Western Canada
Serv-West Distribution Ltd.,
8320 Prince Edward Street,
Vancouver, B.C. V5X 3R9

Coles Publishing Company Ltd.,
90 Ronson Dr.,
Rexdale, Ont. M9W 1C1
Orders:
H.B. Fenn & Co.,
7290 Torbram Rd.,
Unit 3,
Mississauga, Ont.

Collier Macmillan Canada, Ltd.,
Executive Offices:
1125B Leslie Street,
Don Mills, Ont. M3C 2K2
Orders & Accounting:
539 Collier Macmillan Dr.,
Cambridge, Ont. N1R 5W9

Bell & Howell Canada Ltd.,
Audio Visual Products Division,
125 Norfinch Dr.,
Downsview, Ont. M3M 3B5

The Book Society of Canada Ltd.,
4386 Sheppard Avenue East,
Box 200,
Agincourt, Ont. M1S 3B6

Bowmar,
Thomas Nelson & Sons (Canada) Ltd.,
8 Curlew Dr.,
Don Mills, Ont. M3A 2R1

B. Broughton Co. Ltd.,
51A Front Street East,
Toronto, Ont. M5E 1B3

CBC Learning Systems,
Box 500, Terminal A,
Toronto, Ont. M5W 1E6

Can.-Ed. Media Ltd.,
185 Spadina Avenue, Ste. 1,
Toronto, Ont. M5T 2C6

Canadian Film Institute,
Ste. 611, 185 Spadina Avenue,
Toronto, Ont.
and
Canadian Film Institute,
Ste. 1105, 75 Albert Street,
Ottawa, Ont.

Cenco Canada Ltd.,
2200 South Sheridan Way,
Mississauga, Ont. L5J 2M5

Center for Human Development
and Research,
2889 Highbury Street,
Vancouver, B.C. V6R 3T7

Cinemedia,
P.O. Box 332,
Agincourt, Ont. M1S 3B9

Dormac,
P.O. Box 752,
Beaverton, Oregon 97005
U.S.A.

Doubleday Canada Ltd.,
105 Bond Street,
Toronto, Ont. M5B 1Y3

Economy Company,
Individualized Instruction Inc.,
P.O. Box 25308,
1901 North Walnut,
Oklahoma City, Oklahoma 73125
U.S.A.

Edmark Associates,
13249 Northrup Way,
Bellevue, Wash. 98005
U.S.A.

Educational Explorers Ltd.,
40 Silver Street,
Reading, England RG8 2SU

EPC Educational Progress Company,
1160 Blair Rd.,
Burlington, Ont. L7M 1K9

The Continental Press, Inc.,
Western School Supply Company Ltd.,
1525 West 7th Avenue,
Vancouver, B.C.

Copp Clark Publishing,
517 Wellington Street West,
Toronto, Ont. M5V 1G1

The Council for Exceptional Children
1920 Association Drive,
Reston, Virginia 22091
U.S.A.

J.M. Dent & Sons (Canada) Ltd.,
100 Scarsdale Rd.,
Don Mills, Ont. M3B 2R8

Developmental Learning Materials,
7440 Natchez Avenue,
Niles, Illinois 60648
U.S.A.

Fearon Publishers,
Copp Clark Publishing,
517 Wellington Street West,
Toronto, Ont. M5V 1G1

Frank E. Richards Pub. Co., Inc.,
Roy D. Lyons, NW Rep.,
6701 North 17th Street,
Tacoma, Wash. 98406
U.S.A.

Gage Publishing Ltd.,
164 Commander Blvd.,
Agincourt, Ont. M1S 3C7
(carries Teaching Resources,
Scott-Foresman, Rand-McNally)

Ginn & Company,
3771 Victoria Park Ave.,
Scarborough, Ont. M1W 2P9
(Teaching Resources)

Globe/Modern Curriculum Press,
200 Steelcase Road East,
Markham, Ont. L3R 1G2

Gray's Publishing Ltd.,
P.O. Box 2160,
Sidney, B.C. V8L 3S6

Griffin House (Griffin Press Ltd.),
461 King Street West,
Toronto, Ont. M5V 1K7

Grolier Limited,
7th Floor, 200 University Ave.,
Toronto, Ont. M5H 3E2

Guidance Centre,
Faculty of Education,
University of Toronto,
1000 Yonge Street,
Toronto, Ont. M4W 2K8

Harcourt Brace Jovanovich Inc.,
57 Third Avenue
New York, N.Y. 10017
U.S.A.

Longmans Canada Ltd.,
55 Barger Greene Rd.,
Don Mills, Ont. M3C 2A1

Love Publishing Company,
Moyer Vico Ltd.,
25 Milvan Dr.,
Weston, Ont.

McAinsh & Co. Ltd.,
1835 Yonge Street,
Toronto, Ont. M4S 1L6
(also Burgess)

Neil McBurney Associates,
Box 4418,
Main Post Office,
Vancouver, B.C. V6B 3Z8

McGill-Queen's University Press,
Purvis Hall,
1020 Pine Avenue West,
Montreal, Que. H3A 1A2

McGraw Hill Ryerson Ltd.,
330 Progress Avenue,
Scarborough, Ont. M1P 2Z5

Educators Publishing Service Inc.,
75 Moulton Street,
Cambridge, Mass. 02138
U.S.A.

Educators Supplies Ltd.,
105 Falcon Street,
London, Ont. N5W 4Z2

Edu-Media,
1 Adam Street,
P.O. Box 1240,
Kitchener, Ont. N2G 4H1

Electronic Futures Inc.,
Educational Progress Co. Ltd.,
1160 Blair Rd.,
Burlington, Ont. L7M 1K9

Hancock House Publishers Ltd.,
3215 Island View Rd.,
Saanichton, B.C.
V0S 1M0

D.C. Health Canada Ltd.,
Ste. 1600, 100 Adelaide St. West,
Toronto, Ont. M5H 1S9

Holt, Rinehard & Winston of Canada Ltd.,
55 Horner Avenue,
Toronto, Ont. M8Z 4X6

Houghton Mifflin Canada Ltd.,
67 Steelcase Road West,
Unit A,
Markham, Ont. L3R 2M4

House of Learning Ltd.,
P.O. Box 152,
Stratford, Ont. N5A 6T1

Ideal School Supply Company,
Moyer Vico Ltd.,
25 Milvan Dr.,
Weston, Ont. M9L 1Z1

Institute of Psychological Research Inc.,
34 Fleury Street West,
Montreal, Que. H3L 1S9

The Interstate,
19-27 North Jackson Street,
Danville, Ill. 61832
U.S.A.

Louise Kool & Son Ltd.,
130-132 Sunrise Avenue,
Toronto, Ont. M4A 1B6

Learning Concepts Ltd.,
Scholars Choice Ltd.,
50 Ballantyne Avenue,
Stratford, Ont. N5A 6T9

J.B. Lippincott Co. of Canada Ltd.,
75 Horner Avenue,
Toronto, Ont. M8Z 4X7

Macmillan Co. of Canada Ltd.,
70 Bond Street,
Toronto, Ont. M5B 1X3

Charles E. Merrill Publishing,
Bell & Howell Canada Ltd.,
125 Norfinch Dr.,
Downsview, Ont. M3M 3B5

Ministry of Education, Science and Technology,
Publication Services,
Text Book Branch,
Victoria, B.C. V8V 1X4

Mitchell Press Ltd.,
P.O. Box 6000,
Vancouver, B.C. V6B 4B9

Modern Education Corporation,
Kahl's Inc.,
P.O. Box 126,
Kitchener, Ont. N2G 3W9

Moyer Vico Corp.,
25 Milvan Dr.,
Weston, Ont. M9L 1Z1

and
750 Laurentian Blvd.,
Montreal, Que. H4M 2M4
and
1652 West 7th Avenue,
Vancouver, B.C. V5M 1R8
(Steck-Vaughan)
and
Ste. 212, 1541 Barrington Street,
Halifax, N.S. B3J 1Z5
(Follett)

MacLean-Hunter Ltd.,
481 University Ave.,
Toronto, Ont. M5W 1A7

George J. McLeod Ltd.,
73 Bathurst Street,
Toronto, Ont. M5V 2P8

The Ontario Publishing Co. Ltd.,
33 Kern Rd.,
Don Mills, Ont. M3B 1S9

Oxford University Press,
70 Wynford Dr.,
Don Mills, Ont. M3C 1J9

Pendragon House Ltd.,
2525 Dunwin Dr.,
Mississauga, Ont. L5L 1T2

Penguin Books Canada Ltd.,
2801 John Street,
Markham, Ont. L3R 1B4
and
Ste. 1218 Marine Bldg.,
355 Burrard Street,
Vancouver, B.C. V6C 2T9

Pitman Publishing,
517 Willington Street West,
Toronto, Ont. M5V 1G1
(a division of Copp Clark Ltd.)

Pitt Publishing Company Ltd.,
533 St. Clair Avenue West,
Toronto, Ont. M6C 1A1

Prentice-Hall of Canada Ltd.,
1870 Birchmount Rd.,
Scarborough, Ont. M1P 2J7

Psycan Ltd.,
255 Consumers Rd.,
Willowdale, Ont. M2J 1R3

Psychotechnics Inc.,
Glenview, Illinois, 60025
U.S.A.

Quebec Association for Children
with Learning Disabilities,
4820 Van Horne Ave., Ste. 8,
Montreal, Que. H3W 1J3

Random House of Canada Ltd.,
5390 Ambler Dr.,
Mississauga, Ont. L4W 1Y7

Slosson Education Pub. Inc.,
P.O. Box 280,
East Aurora, N.Y. 14052
U.S.A.

Society for Visual Education Inc.,
1345 Diversey Parkway,
Chicago, Ill. 60614
U.S.A.

Special Child Publications,
4535 Union Bay Place N.E.,
Seattle, Wash. 98105
U.S.A.

Special Education Materials, Inc.,
484 South Broadway,
Yonkers, N.Y. 10705
U.S.A.

Stein Enterprises,
Box 1[illegible]12,
Lynwood, Wash. 98036
U.S.A.

The National Gallery of Canada,
Elgin & Slater Sts.,
Ottawa, Ont. K1A 0M8
Orders: National Museums Publications,
Distribution & Sales,
300 Laurier Avenue West,
Ottawa, Ont. K1A 0M8

National Institute on Mental Retardation,
Kinsmen NIMR Building,
York University Campus,
4700 Keele Street,
Downsview (Toronto), Ont. M3J 1P3

Thomas Nelson & Sons (Canada) Ltd.,
81 Curlew Dr.,
Don Mills, Ont. M3A 2R1

Nelson, Foster & Scott Ltd.,
299 Yorkland Blvd.,
Willowdale, Ont. M2J 1S9

Reader's Digest Association Canada Ltd.,
215 Redfern Avenue,
Montreal, Que. H3Z 2V9

W.B. Saunders Co. Canada Ltd.,
1 Goldthorne Avenue,
Toronto, Ont. M8Z 5T9

Frank Schaffer Materials,
John H. Grossman Associates,
29512 Baycrest Dr.,
Rancho Palos Verdes, Calif. 90274
U.S.A.

Scholars Choice Ltd.,
50 Ballantyne Avenue
Stratford, Ont. N5A 6T9
and
Scholars Choice Personal Shopping Centre,
1150 Homer Street,
Vancouver, B.C. V6B 2X8
(Benefic)

Scholastic-TAB Publications Ltd.,
123 Newkirk Rd.,
Richmond Hill, Ont. L4C 3G5

School Teacher's Educational Projects, Inc.,
South Complex Paine Field,
Everett, Wash. 98204
U.S.A.

Science Research Associates (Canada) Ltd.,
707 Gordon Baker Rd.,
Willowdale, Ont. M2H 2S6
and
560 West St. Laurent, Ste. 100,
Longueuil, Que. J4H 3X3

Setsco Educational Ltd.,
567 Clarke Rd.,
Coquitlam, B.C. V3J 3X4
and
Box 10, Agincourt Station,
4245 Sheppard Avenue East
Scarborough, Ont. M1S 3B4
(Creative Pub.)

Simon & Pierre Publishing Co. Ltd.,
P.O. Box 280,
Adelaide Street Postal Station,
Toronto, Ont. M5C 2J4

Teaching Resources Corp.,
(Ginn & Company),
35 Mobile Rd.,
Toronto, Ont. M4A 1H6

Time/Life Education Inc.,
2201 Dunwin Dr.,
Mississauga, Ont. L5L 1A3

University of Alberta Press,
405 Athabasca Hall,
Edmonton, Alta. T6G 2E7

University of British Columbia Press,
2075 Wesbrook Mall,
Vancouver, B.C. V6T 1W5

Van Nostrand Reinhold Ltd.,
1410 Birchmount Rd.,
Scarborough, Ont. M1P 2E7

Vesta Publications, P.O. Box 1641
Cornwall, Ont. K6H 5V6

4. Organizations

Academic Therapy, P.O. Box 899, San Rafael, California 94901

Alberta ACLD, 11210-102 Avenue, Edmonton, Alberta T5K 0P4

American Association for Children with Learning Disabilities, 5225 Grace Street, Pittsburgh, PA 15236

American Association on Mental Deficiency, 5201 Connecticut Avenue N.W., Washington, DC 20015

American Psychological Association, 1200 Seventeenth Street N.W., Washington, DC 20036

Atlantic Conference on Learning Disabilities, P.O. Box 34, Dartmouth, Nova Scotia

British Columbia Association for Children with Learning Disabilities, 2256 West 12th Street, Vancouver, B.C.

British Columbia Ministry of Education, Special Programs Branch, 213-835 Humboldt Street, Victoria, B.C. V8V 2M4

British Columbia Teachers' Federation, 2235 Burrard Street, Vancouver, B.C., V6J 3H9

Canadian Association for Children with Learning Disabilities, (National Office), 1390 Sherbrooke Street W., Montreal, Quebec, H3G 1K2

The Canadian Committee — The Council for Exceptional Children, 6450 Thorold Stone Road, Niagara Falls, Ontario L2J 1B3

Canadian Education Association, Suite S850-252 Bloor Street W., Toronto, Ontario M5S 1V5

Closer Look — National Information Center for the Handicapped, 1201 Sixteenth Street N.W., Washington, DC 20037

The Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091

Manitoba ACLD, Clifton School, 1070 Clifton Street, Winnipeg, Manitoba R3E 2T7

National Institute on Mental Retardation, York University, 4700 Keele Street, Downsview, Toronto, Ontario M3J 1P3

New Brunswick ACLD, 303 Hamilton Crescent, Chatham, N.B. E1N 2L9

Newfoundland ACLD, 25 Forest Road, St. Johns, Newfoundland A1C 2C2

Nova Scotia ACLD, Box 41, Kennetcook, Hants County, N.S./ 277 Pleasant Street, Suite 204, Dartmouth, N.S.

Orton Society, Inc., 8415 Bellona Lane, Baltimore MD 21204

Ontario ACLD, 88 Eglinton Avenue E., Suite 322, Toronto, Ontario M4P 1B8

Prince Edward Island ACLD, 2 Crestwood Drive, Charlottetown, P.E.I. E1A 3H3

Quebec ACLD, 4820 Van Horne Avenue, Room 8, Montreal, Quebec H3W 1J3

Saskatchewan ACLD, 108 Connaught Crescent, Regina, Sask.

Special Education Association — B.C.T.F. Provincial Specialists Association, 2235 Burrard Street, Vancouver, B.C. V6J 3H9

Yukon ACLD, 1101 Hickory Street, Whitehorse, Yukon

5. Periodicals

ACADEMIC THERAPY, 1539 Fourth Street, San Rafael, California 94901

AMERICAN EDUCATIONAL RESEARCH JOURNAL, 1126, 16th Street NW, Washington DC 20036

AMERICAN JOURNAL OF MENTAL DEFICIENCY, 49 Sheridan Avenue, Albany, New York 12210

ASHA, American Speeech and Hearing Association Journal, 9030 Old Georgetown Road, Washington DC 20014

BRITISH COLUMBIA JOURNAL OF SPECIAL EDUCATION, 2031 Long Street, Kelowna, B.C., Canada

BRITISH JOURNAL OF DISORDERS OF COMMUNICATION, 4345 Annandale Street, Edinburgh EH7 4 AT, Scotland

BULLETIN OF THE ORTON SOCIETY, 8415 Bellona Lane, Suite 204, Towson, Maryland 20402

CSMR BULLETIN, 345 Campus Towers, Edmonton, Alberta, Canada

CANADA'S MENTAL HEALTH, Information Canada, Ottawa K1A 0S9, Canada

CHILD DEVELOPMENT, 5750 Ellis Avenue, Chicago, Illinois 60637

DEFICIENCY MENTALE/MENTAL RETARDATION, York University, 4700 Keele Street, Downsview, Ontario M3J 1P3, Canada

DYSLEXIA REVIEW, The Dyslexia Institute, 133 Greshman Road, Staines, TW18 2AJ, England

EXCEPTIONAL CHILDREN, 1920 Association Drive, Reston, Virginia 22091

EXCEPTIONAL PARENT, 264 Beacon Street, Boston, Massachusetts 02116

FAMILY INVOLVEMENT, Canadian Education Programs, 41 Madison Avenue, Toronto, Ontario M5R 2S2, Canada

FOCUS ON EXCEPTIONAL CHILDREN, 6635 East Villanova Place, Denver, Colorado 80222

INTERNATIONAL REHABILITATION REVIEW, 219 East 44th Street, New York, New York 10017

INVOLVEMENT, PO Box 460, Oak Ridges, Ontario, Canada

JOURNAL OF APPLIED BEHAVIOR ANALYSIS, University of Kansas, Lawrence, Kansas 66044

JOURNAL OF ASSOCIATION FOR STUDY OF PERCEPTION, PO Box 744, DeKalb, Illinois 60115

JOURNAL OF COMMUNICATION DISORDERS, American Elsevier Publishing Co., 52 Vanderbilt Avenue, New York, New York 10014

JOURNAL OF EDUCATION, Department of Education, Halifax, Nova Scotia

JOURNAL OF LEARNING DISABILITIES, 101 E. Ontario St., Chicago IL 60611

JOURNAL OF SPECIAL EDUCATION, Grune and Stratton, 111 Fifth Avenue, New York, New York 10003

LEARNING, 530 University Avenue, Palo Alto, California 94301

PERCEPTUAL AND MOTOR SKILLS, Box 1441, Missoula MT 59801

THE POST, Newsletter of the Canadian Association for Children with Learning Disabilities, 1390 Sherbrooke Street W., Montreal, Quebec H3G 1K2, Canada

ProD INFORMATIONAL BULLETIN, B.C. Teachers' Federation, 105-2235 Burrard Street, Vancouver, B.C., V6J 3H9, Canada

REHABILITATION GAZETTE, 4502 Maryland Avenue, St. Louis, Missouri 63108

SPECIAL EDUCATION ASSOCIATION NEWSLETTER, 3025 New Lake Road, Cranbrook, B.C., V1C 4H4, Canada

SPECIAL EDUCATION IN CANADA, Dave Muir, Subscriptions, 12 Doucett Pl., Scarborough, Ontario M1G 3M2, Canada

TEACHER, 22 West Putnam Avenue, Greenwich, Connecticut 06830

TEACHING EXCEPTIONAL CHILDREN, 1920 Association Drive, Reston, Virginia 22091

Materials From The Association for Children with Learning Disabilities.

Causes of Learning Disabilities — The Biomedical Approach.

Hyperactivity — sit DOWN darn it!

M. Macphail, Hyperactivity.

Weaver, An Autobiography of a Learning Disabled Child.

Have you ever known a perceptually handicapped child?

The Educationally Handicapped.

Steel, D.M. Dyslexia in British Columbia Schools — 1973.

He Looks Like Other Kids.

6. Bibliography

Birch, H.G. *Brain Damage in Children*. Baltimore: Williams & Wilkens, 1964.

Bosco, J.J., & Robin, S.S. (Eds.). *The Hyperactive Child and Stimulant Drugs*. Chicago: University of Chicago Press, 1977.

Bryant, N.D. "Learning Disabilities — A Report on the State of the Art". *Teachers College Record*, Vol. 75, No. 3, February, 1974.

Carr, W.G.L. *The Medical Practitioner and Learning Disabilities*. Vancouver: B.C. Special Education Association, November, 1974.

Carson, J. "Learning Disabilities field said 'in state of chaos'". Toronto: *Globe and Mail*, November 8, 1975.

Connors, C. Keith. Deanol and behavior disorders in children: A critical review of the literature and recommended future studies for determining efficacy. *Psychopharmacology Bulletin*, 1973 (Special issue), 188-195.

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7. Glossary

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Ablation	Cutting and removing a section of tissue. Cerebral ablation: surgical removal of a part of the brain.
Acalculia	An inability to do simple arithmetic work, to appreciate numerical relationships, to appropriately arrange numerical symbols, or to order on the basis of numerical value.
Adaptive Behavior	Ability of an individual to perform usual daily living tasks such as dressing, eating, eliminating, etc., as well as to cope with other ordinary demands his/her particular culture makes on all members of the same age.
Adductor	A muscle used to draw toward or past the median axis of the body, also to bring together similar parts such as the fingers.
Agenesis	Failure of tissue or an organ to grow and develop normally.
Agglutinin	An antibody in the blood serum causing particles to collect into clumps.
Agnosia	Not knowing; inability to recognize or interpret the meaning of familiar objects, events, or sensations, as a result of a brain lesion or dysfunction.
Agraphia	Impairment in the ability to write.
Alexia	Loss of the ability to read written or printed language.
Ambidextrous	Both right-handed and left-handed.
Amblyopia	Dimness of sight without any apparent organic defect caused by lack of fusion between both eyes resulting in the suppression of one eye's vision at the CNS level and not correctable by lenses.
Amentia	Mental deficiency; severe lack of mental development such as that of profoundly retarded individuals.
Amino Acids	One of a group of acids which are both basic and acid and are obtained from protein by hydrolysis.
Anarthria	Inability to form words accurately.
Angiogram	X-ray studies of the cerebral blood vessel system following injection of radiopaque material into the arterial system.
Angular Gyrus	A cerebral convolution that forms the back part of the lower parietal region of the brain.
Anomaly	A deviation from the common rule; irregularity — something out of keeping with accepted notions of fitness or order.
Anomia	An inability to name objects or recall and recognize names.
Anoxia	Deficiency or lack of oxygen. It may occur in the newborn in the transition from maternal supply of oxygenated cord blood to independent breathing. The brain cells are particularly vulnerable to continued anoxia.
Aphasia	Defect or loss of the power of expression by speech, writing, or signs, or of comprehending spoken or written language.
Aphasia, auditory	Loss of ability to hear and understand speech; loss of auditory acuity.
Aphasia, semantic	Lack of ability to understand meaning of words.
Apraxia	Inability to perform purposeful movements in the use of material objects or tools.
Articulation	The utterance of the individual speech sounds.
Asphyxia	A lack of oxygen or excess of carbon dioxide in the blood causing unconsciousness.

Aspirate	To pronounce a vowel or a word with an initial *h* sound.
Association	Organizing sensory data.
Asthma	A disease marked by recurrent attacks of wheezing coughs, labored breathing (particularly on expiration of air), and a sense of constriction due to spasmodic contraction of the bronchi.
Astereognosis	Form of agnosia in which one cannot recognize objects or their forms by touching them.
Astigmatism	Faulty vision caused by irregularity in the curvature of refractive surfaces of the eye.
Ataxia	A form of cerebral palsy marked by incoordination in voluntary muscular movements.
Athetosis	A form of cerebral palsy marked by slow, recurring, weaving movements of arms and legs, and by facial grimaces.
Audiogram	Graphic record of hearing acuity at selected intensities throughout the normal range of audibility recorded from a pure tone audiometer.
Audiometer	Instrument for testing acuity of hearing.
Auditory Association	Ability to relate concepts presented orally.
Auditory Closure	The ability to recognize the whole from the presentation of a partial stimulus.
Auditory Discrimination	Ability to select the dominant sound from interfering background sounds — to concentrate on the important sound as distinct from the unimportant. Able to respond to directions involving more than one or two words.
Auditory Figure Ground	Ability to select the dominant sound from interfering background sounds — to concentrate on the important sound as distinct from the unimportant.
Auditory Reception	Auditory decoding; understanding words spoken by another person.
Auditory Sequencing	Ability to recall details previously heard in their correct order, such as in correctly repeating digits or other spoken sounds.
Auditory Sequential Memory	The ability to reproduce a sequence of auditory stimuli.
Auditory-Vocal Association	Ability to intelligently respond verbally to a stimulus which has been heard.
Autotelic	That which serves as an end within itself; describes an activity which is pursued for its own regard (intrinsically motivating).
Autism, infantile	Severe psychiatric disorder in infants and children with severe inability to communicate in social interaction, living in their private and self-centered world.
Aversive Stimulus	A stimulus which a subject would avoid if possible.
Behaviour	The response of the organism to its own sensory organization of the stimulus rather than the response of the organism to the stimulus.
Bilingual	Using or able to use two languages.
Binocular	Seeing with both eyes in focus together.
Biofeedback	A technique using operant conditioning to alter the brain waves of a patient. Clinically this may be used to reduce pulse rate, lower temperature, and alter other autonomic functions.
Blend	A word made by putting together parts of other words, as dandle, a blend of dance and handle. In phonics, the smooth passage from one sound in a word to the next.
Body Image or Body Schema	The picture or mental representation one has of one's own body at rest or in motion at any moment. Body image is also a synonym of body concept, meaning one's evaluation of one's own body, with special attention to how one thinks or fantasies that it looks to others.
Brain Damage	A structural injury to the brain from accident, disease, or surgery.
Brain Dysfunction	Description for a child of average intelligence who exhibits some learning disabilities as a result of a presumed minimal dysfunction of the central nervous system; differentiated from such major brain or cerebral disorders as cerebral palsy and epilepsy by "soft" or minimal symptoms such as poor concentration, hyperactivity or mild perceptual and motor impairments.

Brain-injured Child	One who has suffered brain damage before, during or after birth which damage may interfere with normal learning and/or development.
Bronchiectasis	A chronic dilation of one of the two main branches of the windpipe or their subdivisions.
Carbohydrate	Any of various neutral compounds as sugars, starches, and cellulose which constitute a major part of human foods.
Carotid Injection of Amytal	Refers to the test for speech dominance first developed by Dr. Juhn Wada. The carotid is the large artery running up each side of the neck. When amytal is injected into the left carotid artery it is carried to the left cerebral hemisphere in a matter of seconds where it has an aesthetizing effect. In most patients this produces temporary interference with all language processes. When injected into the right carotid artery it usually interferes with the patient's ability for pictorial interpretation and spatial perception.
Cataract	A condition of the eye in which the crystalline lens and/or its capsule become opaque with consequent dimming of vision.
Catastrophic Reaction	Response to a shock or a threatening situation with which the individual is unprepared to cope. Behavior is inadequate, vacillating, inconsistent, and generally retarded.
Categorization	Ability to group a variety of familiar things with a common element; i.e. apples, oranges and plums = fruit.
Central Nervous System (C.N.S.)	That part of the nervous system to which the sensory impulses are transmitted and from which motor impulses pass out; in vertebrates the brain and spinal cord.
Cerebellum	A mass of tissue at the lower end of the brain stem, on the posterior surface, and involved in neuromuscular coordination.
Cerebral	Pertaining to the cerebrum (often used to refer to the whole brain).
Cerebrospinal Fluid	The fluid that circulates in certain spaces within the brain and down the central canal of the spinal cord.
Cerebrum	The brain.
Cerebral Cortex	External gray layer of the brain containing nearly 14 billion neuronal cells and mediating the most complex human functions such as language, abstract problem-solving, creating and synthesizing ideas, etc.
Cerebral Dominance	Assumption that one cerebral hemisphere generally leads the other in control of bodily movements. In most individuals the left side of the brain controls language and is considered the dominant hemisphere.
Cerebral Palsy	Paralysis caused by a lesion in the brain which can be found at birth, resulting in a weakening of the limbs; may include ataxia, involuntary movements and possibly some degree of mental deficiency.
Cholinesterase	Enzyme reputed to remove acetycholine from cell walls at synapse; appears to act as a circuit breaker in transmission of nerve impulses.
Chromosomes	Threadline structures found in nucleus of cells along which are arranged the genes; in the male there are 22 pairs of autosomes and 1 pair of XY sex chromosomes; in the female, there are 22 pairs of autosomes and 1 pair of XX sex chromosomes.
Chorea	Motor disorder characterized by jerky, spasmodic movements.
Choreiform Syndrome	Term used to describe the symptoms characteristic of children who have reading disabilities, including hyperkinesis, faulty dominance, dyskinesia, visual perceptual difficulties, and poor concentration.
Cleft Palate	Congenital fissure of the roof of the mouth, often associated with cleft lip (harelip).
Clonic	Pertaining to a spasm (clonus) in which rigidity and relaxation alternate in rapid succession.
Clonus	Involuntary rapid contractions and relaxations of a muscle.
Cluttering	Bursting, nervous speech marked by frequent omissions and substitutions of sound.
CNS	Central nervous system; the brain or cerebrum, spinal cord, and peripheral nerves.
Cochlea	Shell-like cavity of inner ear containing the endings of the auditory nerve.

Conductive Hearing Loss	A condition which reduces the intensity of the sound vibrations reaching the auditory nerve in the inner ear.
Cognitive	The faculty of knowing, of becoming aware of objects of thought or perception, including understanding and reasoning.
Cognitive Process	Mental activity in which the individual begins with the concrete level of knowledge and may proceed through the abstract levels of analysis and synthesis.
Communication	Interchange of information or thought by speech, print, signs or signals; the message which is communicated.
Comprehension	In reading, the ability to extract meaning from a written selection, especially the meaning and implication of the whole paragraph.
Concept	A general idea of a class of objects.
Conceptual Disorders	Disturbance of the cognitive process in thinking activities dealing with abstract concepts.
Conditioning	Repeated response to a stimulus other than the original or normal stimulus through association with the new stimulus: Pavlov's classical conditioned reflex where the dogs salivated at the sound of a bell instead of the presence of food.
Congenital	Present at birth, but not necessarily hereditary.
Congenital Defects	Existing at birth or before birth — many children are born with subtle congenital defects of the brain and nervous system. Sometimes these defects or injuries clear up so completely that there are no discernible traces after a few years.
Conservation	In piaget theory the ability to retain a concept of area, mass, length, etc., when superficial changes are made in the appearance of an object or scene.
Convergent Thinking	Analysis of given data, which, because of its structured nature, produces a single correct answer to the problem; opposite of divergent thinking.
Critical Period	A period in the life history which is particularly important for some or other aspect of growth and maturation. Organs or functions prevented from developing properly during their critical period remain deformed or defective. After the critical period, adverse influences and interferences are more easily resisted.
Cross-Dominance	Sensorimotor functioning characterized by right-handed and left-eyed, or left-handed and right-eyed performance; occasionally refers to dominance of ear or foot as well.
Cursive Script	Writing or printing type in flowing strokes, with the letters joined together.
Cyanosis	Blueness of the skin, caused by insufficient oxygen in the blood, as a result of poor circulation or, especially in the newborn, delayed or insufficient breathing.
Deafness, nerve	Deafness resulting from lesions associated with sensory receptors of the cochlea or acoustic nerve fibers.
Decibel	A relative measure of the intensity of sounds, zero decibel represents normal hearing.
Decode	Ability to identify sound value (phonemes) of the printed symbol (grapheme); being able to look at the printed symbol *cart* and to pronounce the word "*cart*".
Defect	Incomplete or imperfect as in mental defect or deficit.
Deficiency, mental	Term encompassing all the levels below normal intelligence, i.e., more than 1 S.D. below the mean intelligence of approximately 100.
Delayed Development	A general delay in all developmental aspects with indications of normal potential.
Dendrite	Part of neuron's structure which carries nerve impulses to adjacent cells.
Denial	Unconscious defense mechanism used in temporarily allaying anxiety and resolving conflicts by refusing to admit existence of anxiety-causing objects.
Development	Changes in an individual from conception to death.
Developmental Disability	A disability attributable to mental retardation, cerebral palsy, epilepsy or another neurological condition of an individual found by the Secretary of the U.S. Department of Health, Education, and

	Welfare to be closely related to mental retardation or to require treatment similar to that required for mentally retarded individuals, which disability originates before such individual attains age 18, which has continued or can be expected to continue indefinitely, and which constitutes a substantial handicap to such individual.
Diabetes Mellitus	A disorder of carbohydrate metabolism characterized by an excessive amount of glucose (sugar) in the urine and in the blood.
Diagnosis	Analysis of available information, subjective and objective, to determine the nature, etiology, and pattern of a disability; such activity has as its goal the development of a prescriptive program for correction.
Diagnosis, clinical	Intensive analysis of person's disability made by a specialist or team of specialists representing various disciplines; in current practice, a prescriptive treatment plan is generated from such an evaluation.
Dichotic Listening	A technique for stimulating simultaneously both ears of a Subject with different words, usually with similar initial sounds and lengths. This is used to investigate cerebral dominance for language.
Dilantin (diphenylhydantoin)	Anticonvulsant drug used for hyperactive children and epilepsy.
Diplegia	Bilateral paralysis affecting like parts on both sides of the body.
Diplopia	Condition in which one subject is seen as two; double vision.
Dipthong	A composite speech sound made up of two vowels, one blending with the other, as "ei" in vein.
Directional Confusion	Characteristic of making reversals and substitutions resulting from a left-right or laterality orientation disorder.
Directionality	Ability to distinguish difference in direction — left from right — lack of, causes inability to tell "b" from "d".
Discrimination, auditory	Ability to detect likenesses and differences in sound stimuli — also gustatory, kinesthetic, olfactory, tactile, and visual sensory modalities.
Disinhibition	Lack of ability to refrain from response to what is perceived, often resulting in hyperactivity and distractibility.
Distractibility	Inability to hold one's attention; the tendency to be easily drawn to extraneous stimuli or to focus on unimportant details to the abnormal extent of becoming confused by the task.
Divergent Thinking	Analysis of a problem resulting in multiple solutions or conclusions which an individual may rank in order of various values; opposite of convergent thinking.
DLD	Abbreviation for developmental and/or learning disability, both of which are defined elsewhere in this glossary and are discussed in detail in Chapter 1. These disabilities may have intraindividual or extraindividual origins (see Chapter 3) and may exist singly or in multiple combinations.
Down's Syndrome	A variety of congenital cognitive/intellectual DLD with abnormal physical development characterized by a flat skull, a fold of skin over the inner angles of the eyes giving a "mongoloid" appearance, stubby fingers, and fissured tongue; these characteristics were described in 1866 by J. Landen Down and result from the presence of an extra chromosome on the twenty-first pair (trisomy 21).
Dysacusis	Impairment in hearing not involving sensitivity loss but rather distortion of loudness and/or pitch.
Dysarthria	Inability to articulate speech sounds intelligibly, usually reflecting a CNS dysfunction in speech/motor musculature.
Dysbulia	Confusion in the ability to think and to attend.
Dysdiadochokinesis	Lack of the ability to perform repetitive movements such as finger tapping.
Dyscalculia	A partial disturbance of the ability to manipulate arithmetic symbols and to do mathematical calculations.
Dysfunction	Disturbance, impairment or abnormality of functioning of any organ.
Dysgraphia	Inability to produce motor movements required for handwriting.
Dyskinesia	Impairment of the power of voluntary movement, resulting in fragmentary and poorly coordinated movement.
Dyslalia	Speech impairment of functional origin; sometimes caused by defective speech organs.

Dyslexia	Impairment of the ability to read.
Dysnomia	Condition characterized by the inability to recall words at will even when the individual knows the word he wishes to recall and can recognize it when said.
Dysphasia	Difficulty in writing or speaking usually as a result of CNS impairment.
Dysrhythmia	Abnormal speech fluency characterized by defective stress, intonation, and breath control.
Echoencephalogram	A device which directs high frequency sound waves through the skull and brain tissue to detect brain tissue abnormalities.
Echolalia	Dysfunction characterized by the repetition of words or phrases spoken by another, such repetition does not convey meaning and is frequently associated with some psychiatric schizophrenic disorders.
Edema	The presence of abnormally large amounts of fluid in the intercellular tissue spaces of the body.
Educable Mentally Retarded (EMR)	Individual within an IQ in the range of 50-75 as measured by an individualized test of mental ability; now popularly referred to as significantly limited intellectual capacity (SLIC) in many public school systems.
Electrocardiogram (EKG)	A graph of the electrical activity of the heart.
Electrode Implantation in the Brain	Surgical insertion of mental electrodes to record the electrical changes in the cerebral locus of the electrode during specific observed behaviors.
Electroencephalogram (EEG)	A graph of the electrical activity of various parts of the cerebral cortex of the brain.
Electromyogram (EMG)	A graph of the electrical activity of muscles caused by contraction and relaxation.
Electrooculogram	An electrographic tracing of eye movements using the reading eye camera.
Encephalitis	Acute inflammation of the brain substance or its membraneous coverings.
Encephalitis Lethargica	An infectious inflammation of the brain (sleeping sickness).
Encoding	Analysis and conversion of oral language into representative written symbols.
Enuresis	Lack of control over urination; bedwetting.
Epilepsy	Brain disorder characterized by excessive neuronal discharge, accompanied by temporary episodes of motor, sensory, or psychic dysfunction with or without convulsive movements or loss of consciousness; during an episode there is a marked change in recorded electrical brain activity (EEG); grand mal, gross convulsive seizures with momentary lapses of consciousness; psychomotor, recurrent periodic disturbances of behavior often done in repetitive, organized, but semi-automatic fashion.
Etiology	The study of causes or origins of a disease or condition.
Evaluation	Process of determining the effectiveness of instruction for an individual, a group, or a whole program; examining subjective judgment, qualitative and quantitative changes in relation of stated objectives; making value judgments about the seriousness and prognosis of diagnostic findings.
Exaphoria	Insufficient action of certain muscles of the eye so that one eye tends to deviate outward but can be controlled by extra muscular effort.
Extrinsic Motivation	Desire to engage in an activity in order to obtain some other unrelated or external reward; for example, mastering a learning task for money or praise rather than the rewarding experience of the learning itself.
Extraindividual	Originating outside of the individual and beyond his control; not organic but ecological in origin.
Exteroceptors	Skin receptors which sense warmth, cold, touch pressure, or other changes in the immediate external environment.

Expressive Language Skills	Those required to communicate ideas through language, such as writing, gesturing, and speaking.
Exogenous	Originating outside the body; in disability analysis a condition whose etiology is other than hereditary or genetic.
Exceptional Child	Child with a physical, mental, or learning abnormality who requires an adjusted instructional program to meet his specific needs: as the slow learner, blind, deaf, DLD, and gifted.
Familial	Occurring in members of the same family, as a familial disease.
Figure Ground	(Visual) an object as distinguished from movements in the background or objects on the periphery.
Figure Ground Discrimination	Able to select the dominant foreground figure from a distracting background. Ability to concentrate on the important details as distinct from the unimportant.
Figure Ground Disturbance	The inability to discriminate a figure from its background.
Figure Ground Perception	Ability to select a specific pattern or center of attention from the total field of incoming stimuli; the figure is the center of attention; the ground is the balance of the mass of stimuli.
Fine Motor Activities	Motor output through which the fine and delicate muscle system is employed in precision movements.
Finger Agnosia	Inability to recognize the name or identify the individual fingers of one's own hand.
Fixate	Ability of both eyes to quickly and accurately locate a target both at a distance and nearby (close point).
Fluency	Unhesitant speech.
Form Constancy	The meaning or significance of a form or shape is dependent upon the absence of various modifications, additions, or subtractions of detail.
Functional	A process in operation; i.e., the function of the thyroid gland, of locomotion, of growth. The use of the structure or activity, i.e., its role in biological social adjustments. The operation or activity in general.
Functional Literacy	Level of reading ability which is necessary to function in our society; somewhere between fourth and seventh grade reading level.
Galactosemia	An inherited condition of mental retardation caused by an error in the metabolism of the galactose in milk.
General Intelligence	The global or aggregate capacity to act purposefully, to think rationally, and to deal effectively with the environment. (Wechsler)
Genetic	Inherited.
Gene	Submicroscopic structure or organization of the chromatin in chromosomes; physical unit of heredity.
Genotype	Genetic composition of an individual determined by genes and chromosomes; when reflected through interaction with one's environment, the observable product is the phenotype.
Gestalt	A form, a configuration, or a totality that has, as a unified whole, properties which cannot be derived by summation from the parts of their relationships; the whole is greater or more meaningful than the sum of the parts.
Gifted	Those with IQ of 120+ who demonstrate a high level of learning ability; talented.
Glaucoma	Increased pressure inside the eyeball caused by accumulation of fluid in the front portion.
Gnosia	The faculty of perceiving and knowing.
Grammatic Closure	Ability to make use of the redundancies of oral language in acquiring automatic habits for handling syntax and grammatic inflections.
Grapheme	Written or printed counterpart of a phoneme; a written language symbol that represents oral language.
Gross Motor Activity	Movement in which groups of large muscles are employed and total body rhythm and balance are of major importance.
Holo Effect	Tendency to rate an individual consistently high or low on the basis of subjective general impression.
Haptic Perception	Process of getting information through the kinesthetic and tactile sensory modalities.

Hawthorne Effect	Condition arising in an experimental study which alters group performance because of members' awareness and interest as participants in the research.
Hearing Loss, conductive	Loss of acuity as a result of a reduction or total elimination of sound stimulus transmission through external and middle ear processes to the inner ear.
Hearing Loss, sensorineural	Loss of acuity as a result of a defect or disease of the cochlea or acoustic nerve.
Hemispheres	Left and right halves into which the brain is divided.
Heterogeneous	Composed of parts which represent a wide range of difference or variability; in instructional grouping, refers to placing students together with regard for ability, achievement, age, or other characteristics; antonym to homogeneous.
Homogeneous	Composed of similar parts which represent a narrow range of variability; antonym to heterogeneous (above).
Hydrocephalus	Condition characterized by extreme pressure caused by excessive amount of cerebrospinal fluid within the skull which produces enlargement of the head and atrophy of the brain.
Hyperactivity	Excessive activity or energy; overactivity or excessive motor movement sometimes called *hyperkinesis;* describes an individual who seems to always be in motion and, therefore, disturbing to classroom teachers and other students in school or in other structured settings; often associated with reading disability, perceptual difficulties, mixed dominance, concentration problems, moodiness, temper tantrums, anti-social behavior, low frustration tolerance, poor impulse control, imbalance and unpredictability; on tests, this child had difficulties with tasks that involve motor, visual, and auditory areas and scores higher in verbal than performance areas.
Hyperopia	Visual condition in which light rays focus behind the retina instead of on it; farsightedness.
Hypoactivity	Pronounced lack of physical activity; antonym to hyperactivity.
Iatrogenic	An iatrogenic condition is one which is caused by treatment of related condition; for example, an emotional illness inadvertently induced by a therapist's attitude or comments or setting.
Information Theory	Interdisciplinary study, of which communications or theory is the technology, dealing with the transmission of signals or the communication of information; it draws upon cybernetics, engineering, linguistics, physics, psychology, and sociology.
Initial Teaching Alphabet	Alphabet, augmented Roman, 44-letter alphabet evolved in England by Sir James Putman; employs all letters of English alphabet except x and q plus 20 new symbols; each of the 44 letters in the new alphabet stands for only one sound; incorporated in a beginning reading program known as the ITA.
Intelligence	Individual's ability to perceive relationships such as logical, spatial, numerical, and verbal; to learn, to recall, and to integrate constructively previous learning and experience to solve new problems; sometimes referred to as mental age or scholastic aptitude; measured by verbal and nonverbal tests of cognitive/intellectual functioning.
Intelligence Quotient (IQ)	Ratio of mental age in months (MA), as determined by a test of mental abilities, to chronological age in months (CA) for an individual. IQ = (MA/CA) × 100.
Intraindividual	Originating within an individual's organism and may or may not be subject to his conscious control.
Intrinsic Motivation	Desire within oneself to engage in a given activity simply for the satisfaction or reward derived therefrom; autotelic.
In Utera	Period of time in a baby's life from conception until birth.
Keratitis	Inflammation of the cornea.
Kinesthesis	Sensory awareness and impression of movement or strain in muscles, tendons, or joints.
Kinesthetic Imagery	Muscle imagery from recalled sense of movement or muscles, not actual.

Larynx	The modified upper part of the windpipe; the organ of the voice.
Laterality	The internal sensorimotor awareness of the two sides of one's body and the ability to identify them as left or right correctly; frequently refers to establishing one dominant side such as right-eyed, right-eared, right-handed, and right-footed.
Learning	Change in behavior and/or perception.
Learning Disabilities Specialist	One involved in the diagnosis and classification of severely handicapped children. This includes an estimate of the child's sensory abilities as well as an estimate of his strengths and weaknesses in academic learning. The learning disabilities specialist is aware of and responsive to the individual development of each child, whose individual differences are considered when the educational prescription is made. The learning disabilities specialist is a "child-oriented" learning facilitator.
Learning Disability	A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia, but such a term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, of emotional disturbance, or of environmental disadvantage.
Lesions	Any alteration such as a wound, or a scar, caused by injury or disease.
Linguistics	The study of human speech, including the origin, modifications and structure of language.
Lisp	An articulatory disorder characterized by defective sibilant sounds such as "S" and "Z".
Logorrhea	Excessive, uncontrollable talking; diarrhea of the mouth and constipation of the brain.
Look-Say Procedure	Whole word learning by looking and saying.
Maturation	Physiological, mental, and neurological development consistent with chronological age.
Maturation Lag	Delay in physiological, mental, or neurological development without apparent structural defect.
Mnemonics	Pertaining to memory or to the art of memorizing; more specifically pertaining to the art of improving memory.
Mental Retardation	Significantly subaverage general cognitive/intellectual functioning existing concurrently with impaired adaptive behavior.
Meningioma	A slow-growing tumor in the meninges or membranes covering the brain.
Metabolism	The physical and chemical processes in living cells by which energy is provided for vital activities.
Midbrain	A part of the upper brain stem connecting the cerebrum, involved with cranial reflexes. It is part of the reticular system.
Midline	(Body) a plane dividing left from right.
Minimal Brain Dysfunction	A mild neurological abnormality causing various intraindividual DLDs in a child with normal or near normal intelligence; characterized by "soft" neurological signs; also called mild or minimal cerebral dysfunction.
Mixed Dominance	Basis for theory that speech or language disorders may be caused wholly or partly by the fact that one cerebral hemisphere does not consistently lead the other in control of sensorimotor perception or bodily movement.
Mixed Laterality	Tendency to perform some acts with a right side preference and others with a left side preference; may involve the confused shifting from right to left in differing situations.
Modality	Group of common sensory qualities which form pathways for receiving information and learning, as the visual modality, auditory modality, etc.; some individuals seem to prefer one modality for learning others.

Morpheme	Smallest meaning-bearing unit in the structure of words, a root, prefix, suffix, or an inflectional ending as singing has two morphemes — *sing* and *ing*.
Motor Praxis	The ability to carry out a neuromuscular act.
Motor Sequencing	Ability to repeat a series of taps or other activities in order.
Multi-Discipline Assessment	An assessment involving a team approach to evaluate the child's problems and determine a remedial program. This team should include personnel of the available professional referral agencies (teacher, psychologist, medical doctor, public health nurse, specialist (eye, ear, speech, mental health, etc.). Efforts would be made to involve the observations and opinions of each professional whereby better communications and classification of goals may lead to effective treatment and better use of each respective agency's resources.
Mutism	Without speech.
Myopia	Nearsightedness in which the rays from distant objects are brought to a focus before they reach the retina.
Neurological	Pertaining to the normal and abnormal function of the nervous system.
Neurologically Impaired	An individual who manifests hard neurological signs; that is, there is evidence of specific and definable central nervous system disorder.
Neurological Examination	An examination of sensory and motor responses, especially of the reflexes, to ascertain whether there are localized impairments of the nervous system.
Neurophysiological	Pertaining to the physiology of the nervous system.
Neurophychology	Mental aspects of the central nervous system's higher operations; concerned primarily with studying and evaluating brain/behavior relationships.
Nongrading	School organizational plan without grade designations to which children are assigned on the basis of achievement; individualized instruction and learning occur through a planned sequence over a period of years.
Normal Distribution Curve	Bell-shaped curve representing the theoretical distribution of an infinitely large number of scores or with deviation from the mean only by change.
Normative	Pertains to norms, standards or values. Normative science is a discipline that systematically studies man's attempts to determine what is normal.
Nosological Definition	Provides a description of the disorder as to its etiology; usually of an intraindividual origin.
Nystagmus	An involuntary rapid movement of the eyeball; lateral, vertical, rotary, or mixed.
Obturator	That which closes or stops an opening.
Ontogeny	Life cycle or biological development of an individual; distinct from phylogeny.
Operant Behavior	Behavior whose rate or form is affected by its consequences.
Ophthalmologist	Medical doctor who treats medical and surgical problems of the eye.
Optometrist	Vision specialist licensed to evaluate visual functioning, to prescribe refractions (glasses) and to treat the functional aspects of vision; cannot use drugs or treat eye diseases as a doctor of medicine (ophthalmologist).
Organicity	DLD condition which has its source or origin within the individual (intraindividual), usually in the central nervous system.
Orthoptics	Correct eye muscle movements for complete binocular vision.
Osteomyelitis	Inflammation of bone which begins with a hematogeneous abscess and, if not checked, may spread through the bone to involve the marrow and other parts.

Otitis Media	Inflammation or fluid in the middle ear, acute or chronic, which impairs hearing more or less and can underlie some language DLDs.
Otolaryngoscopic	Referring to an examination of the ear, nose, and throat. A laryngoscop is an examination of the inside of the larynx by means of a laryngoscope.
Otologist	A physician specializing in hearing defects and diseases of the ear and general hearing apparatus.
Ototoxic	Caused by poison or toxin creating damage to the ear.
Patterning	Ability to use muscles in organized sequences of movements in common movements such as crawling, creeping, etc.
Perceptual Constancy	The ability to perceive an object as possessing invariant properties, such as shape, position and size, in spite of the variability of the impression on the sensory surface.
Perceptual Disorder	Disturbance in the ability to accurately interpret sensory stimulation of intraindividual or extraindividual origin.
Perceptual-Motor Deficit	The inability to make an overt motor response that is not primarily verbal when a concrete, non-verbal, stimulus is present. The child is unable to coordinate his sensory modalities with movements of his body or with movements of a part or parts of his body.
Percentile	For a given score, this value indicates the percentage of subjects tested ranking below that score in the distribution.
Perception	Means by which the individual recognizes, and integrates meaningfully, sensory information; the process of reacting to sense presentations and modifying them further by attention, interests, previous experience; the process giving particular meaning and significance to a given sensation; the means by which an individual organizes and comes to understand the phenomena which constantly impinge upon him.
Perinatal	Connected with or occurring during the birth process; *prenatal* is before birth, *postnatal* is immediately after birth, and *neonatal* is roughly the first month of life after birth.
Perseveration	Tendency to continue the response to a stimulus after the stimulus has been removed or is no longer appropriate; lack of impulse control of a motor or verbal act; for example, an individual may repeat the same words over and over again.
Personality	Person's mental, emotional, and temperamental make-up as they affect his personal and social relationships.
Phenotype	Total interaction of genotype and environment; the individual's observable traits.
Phobia	An excessive, obsessive, persistent, unrealistic fear of an external object or situation.
Phonation	The production of speech sounds.
Phoneme	A speech sound or closely related variants commonly regarded as being the same sound.
Phonics; analytic (whole word approach)	Analytic method in which the specific phoneme is identified within the whole word rather than the sounding of isolated phonemes which are blended into whole words; first a series of sight words is learned, phonemes are then identified, a whole-to-part, gestalt, cognitive-field approach to reading.
Phonics	Simplified phonetics used to teach the recognition and pronunciation of words in reading through sound-symbol relationships.
Phonic Teaching	Teaching reading and spelling by analysis of words by their phonetic elements rather than by their individual letters or total visual appearance.
Phonogram	A symbol that represents a speech sound; a phonogram may be a larger unit than a phoneme.
Play Therapy	Child is placed in a free play situation, usually limited only by the four walls, so that he may play (act) out his frustrations, disturbance, or undesirable traits; observations by the therapist lead to evaluation of problems and treatment of them.
Postnatal	After birth.

Primary Personality Disorder	(Severe emotional disturbance) a non-organic problem with causal factors within the environment, resulting in the child's inability to respond adequately to environmental stimuli.
Prenatal	Pertaining to the time during pregnancy before birth.
Psychiatrist	The medical specialist in the investigation and treatment of mental disorders, including the psychopathological and general medical aspects of the conditions.
Psychiatry	Medical science that deals with the origin, prevention, diagnosis, and treatment of disorders of the mind and their affect on the body (psychosomatic illnesses); the psychiatrist is a medical doctor with additional training in psychology.
Psychoeducational Specialist	One who evaluates an individual who is having difficulty in learning, using a variety of psychological and educational testing instruments, then recommends and/or applies a variety of psycheducational techniques to remedy the DLD condition (see Learning Disabilities Specialist); school psychologists perform these tasks among others.
Psycholinguistics	The study of the processes whereby the intentions of speakers are transformed into signals and whereby these signals are transformed into interpretations of hearers.
Psychology	Behavioral science dealing with the study of mental processes and behavior in man and animals.
Psychoneurology	Area of study that deals with the behavioral disorders associated with brain dysfunctions in human beings; same as neuropsychology.
Psychosomatic	Refers to real physical illness which has at least a partial origin in emotional malfunction.
Psychotherapy	Use of psychological techniques in the treatment of psychological abnormalities and disorders.
Psychotropic	Refers to drugs which have an effect on psychic (mental) function, behavior, and experience.
Reading Readiness	General stage of developmental maturity at which the child can learn to read easily and efficiently; the term may be used to signify ability to begin each succeeding stage of reading development as well as for beginning reading.
Reading Retardation, Primary	Primary reading disability; dysfunction in which the neurophysiological mechanism for learning is not fully developed or is defective, thus producing a DLD or perceptual limitation; the individual is generally of at least normal intelligence but is unable to learn to read efficiently; the problem is organic and may be sensory, neural, or motoric in character; severe cases involving lack of understanding of words are called alexia and dyslexia.
Reading Retardation, Secondary	Dysfunction in which an individual with the capacity to learn, who possesses no physiological or mental limitations, does not acquire skill mastery; the origin of such a DLD is typically extraindividual or psychological.
Receptive Language	Language that is spoken or written by others and received by the individual; includes listening, reading, understanding sign language, etc.
Recessive Trait	A trait, controlled by heredity, that remains latent or subordinate to a dominant characteristic.
Reinforcement	A procedure to strengthen (or weaken) a response by the administration of immediate rewards (positive reinforcement) or punishment (negative reinforcement).
Remedial Instruction	The systematic training to remove a defect or cause of a particular disorder.
Resonance	The vibrating quality of a voice sound.
Response	The activity of an organism or an organ, or the inhibition of previous activity resulting from stimulation.
Retention	Ability to remember sounds, words, events, etc.
Reliability	Extent to which a test will yield the same score or nearly the same score on successive trials; expressed as a reliability coefficient.
Reversal	Perceptual inaccuracy caused by a right to left reading of English letters and words; thus, "pan" is "nap".

Reversal, mirror	The symetrical right-left or near-far shift in apparent position perceived when an object is viewed in a mirror. In reading there may be reversal of single letters "p" for "q", or the order of letters within a word ("yam" for "may") or of the order of a whole phrase.
Retalin (methylphenidate)	One of numerous somewhat controversial psychotropic drugs given to children to promote cerebral control over their lack of attention/concentration and hyperactivity; improves muscular coordination; may cause occasional insomnia, reduced appetite, and constipation; dosage for children usually varies from 2.5-20 mg two or three times per day
Rotations	Ability of eyes to follow a target moving in a circle within visual range.
Rote Memory	The reproduction of learned material in which the factor of meaning may be absent or disregarded.
Saccadic Movements	Jerky eye movements from left to right and back again during reading.
Schema	A number of ideas or concepts combined into a coherent plan; a model that displays the essential or important relations between concepts.
School Phobia	Unfounded fear of an aversion to attending school; generally the causative factor is emotional.
Schizophrenia	A group of psychotic reactions characterized by fundamental disturbances in reality relationships, by a conceptual world determined excessively by feeling and by marked affective, intellectual, and overt behavioral disturbances.
Self-Image	Feelings about self — can often be seen revealed in picture drawn of self.
Semantics	The study of meaning and changes of meaning of words and other linguistic forms.
Semi-Vowel	A speech sound of vowel quality used as a consonant, such as "w" in "wet" and/or "y" in "yet".
Sensorimotor	Any act whose nature is primarily dependent upon the combined or integrated functioning of sense organs and motor mechanisms.
Sensorimotor Skills	Auditory, motor, and visual abilities necessary for the development of efficient adaptive behavior, language, and reading competence.
Sensory-Neural Hearing Loss	A defect of the inner ear or the auditory nerve transmitting impulses to the brain.
Sequential Processing	Dealing with items either auditory or visual, in sequence or serial order, i.e., sequencing.
Slow Learner	Child with a measured IQ of about 75-90.
Social Worker	Person trained to help the individual improve his human relationships with self, family, and community.
Soft Signs	Neurological abnormalities that are mild and difficult to detect, as contrasted with the obvious hard neurological abnormalities.
Sound Blending	Ability to synthesize the separate parts of a word and produce an integrated whole.
Space-Form Blindness	A condition, analogous to colour blindness, in which a person has difficulty discriminating shapes and their relationships. Also called space-form dysgnosia.
Span, auditory memory	Number of items that can be recalled immediately following their spoken presentation.
Spatial Orientation	The perception of the relationship of an object to the observer. Spatially, a person is always the center of his own world and perceives objects as being above, below, before, behind, or to the side of himself.
Specific Language Disability	Specific developmental dyslexia; refers to children with adequate intelligence who have not learned to read, write, spell, or communicate, despite environmental opportunities and conventional-type instruction, although they generally succeed in science and math.
Speech Delayed	Speech development slowed by emotional blockage, mental deficiency, hearing loss, or other factor.

Splinter Skills	Highly specific skills having limited relationship to the activities of the total organism, a motor pattern or skill, usually achieved by rote drill, which exists in isolation from the remainder of the individual's motor activity or ability.
Stereognosis	An ability to somatically perceive objects, forms, materials according to shape, size, quality of materials.
Strephosymbolia	Twisted symbols; a persistent and pervasive reversing of symbols found in children's reading and writing in spite of their normal or above intelligence; mirror reading and or writing as in "was" for "saw", "felt" for "left".
Stereopsis	Stereoscopic vision; i.e., three dimensional — necessary for depth and distance perception.
Stimulus	A stimulus is something that (a) stirs or prods the organism (b) is external to the organism or to a definitely organized part of an organism, and (c) is associated with sensory processes (auditory, visual, tactile, etc.).
Strabismus	An eye condition in which there is a lack of coordination of the eye muscles, characterized by a squint or cross-eyes.
Strauss Syndrome	Collection of behaviors descriptive of a brain-injured child whose impairment is caused by something other than genetic causes; specific characteristics are hyperactivity, emotionally labile, perceptually disordered, impulsive, distractible, and perseverative.
Stuttering	Speech impediment characterized by hesitations, rapid repetition of elements, and breathing or vocal muscle spasm; in speech correction practice there are three necessary qualifications: (1) no discerned physical or mental abnormalities, (2) stutterer is aware of speech abnormality, and (3) stutterer tries to force correct speech.
Syllabication (syllabification)	Breaking a word into its component syllables.
Synapse	Communication between neurons; the point at which an impulse passes from an axon of one neuron to a dendrite of another; a synapse is polarized so nerve impulses are transmitted only in one direction; it is characterized by fatigability.
Syndrome	A group of symptoms and signs which, when considered together, characterize a disease, disorder, etc.
Synergic	Acting together or in harmony.
Syntax	That part of a grammar system which deals with the arrangement of word forms to show their mutual relations in the sentence.
Synthesis	Process of putting data together to form a whole.
Tachistoscope	An instrument for providing a very brief time exposure of visual material, such as pictures, letters or digits. The exposure may be regulated by a shutter, a falling screen or an interupted illumination.
Tactile (tactual)	Sense of touch.
Tactile Discrimination	Ability to differentiate by touch between rough and smooth, hard and soft, big and little, round and square, etc.
Tactile-Kinesthetic	Combining sensory impressions of touch and muscle movement.
Tactile Procedure	The tracing of a word (or letter, etc.) by children as often as is necessary to learn it, while at the same time usually, the word is said and looked at.
Temporal Disorientation	(Time disorientation) inability to remember day, month, hour or minute — whether lunch time was longer or shorter than recess, etc.
Test	A sample of behavior.
Test, achievement	Evaluation instrument that measures the extent to which a person has acquired information or mastered skills.
Test, intelligence	Group or individual standardized test that measures an individual's ability to perform cognitive/intellectual tasks; IQ test; test of mental ability, as Wechsler Intelligence Scale for Children (WISC) or California Test of Mental Maturity (CTMM).
Test, performance	Ambiguous term meaning a test, usually involving special apparatus or materials, minimizing verbal skills, as opposed to a paper-and-pencil or verbal test, as the Arthur-Point Scale, Leiter International Test, or WISC Block Design Subtest.

Test, personality	Test, questionnaire, or other device designed to assess an individual's internal and external patterns of adjustment to life.
Test, readiness	Test measuring the extent of maturity or the level of prerequisite skill acquisition of an individual for beginning a particular task, as beginning reading.
Test, standardized	Test composed of empirically chosen content; has specific directions for administration, scoring, and interpretation; reports data on reliability and validity; and has adequately developed norms.
Test, verbal	Test in which results depend on the use and comprehension of words, presented orally or visually, as in most paper-and-pencil tests.
Therapy	Treatment for curing or alleviating a disorder.
Time Orientation	(Time perception) proficiency in judging duration, change, order of occurrence, extent of periods of time or infractionating temporal intervals.
T.O.	Abbreviation for traditional orthography, embraces both writing and spelling of words using the traditional 26 letter alphabet.
Tonic	Characterized by contraction of a muscle sufficient to keep the muscle taut but not sufficient to cause movement.
Trauma	A form of injury; commonly, injury by mechanical agents; any injury produced by any physical agent; also, severe psychic injury.
Tremor	A swift vibration of a muscle group.
Tracking	Ability of both eyes to follow or pursue a moving target.
Tumor	A new growth or neoplasm which may be malignant or benign. A mass of tissue which grows independently of its surrounding structures and which has no physiological use.
VAKT	Highly structured systems of teaching reading in which kinesthetic and tactile stimulation is employed in conjunction with the auditory and visual modalities which utilize tracing by the child of a word or letter that has been written; the most widely used Visual-Auditory-Kinesthetic-Tactile (VAKT) systems are the Fernald and the Gillingham Systems.
Validity	The degree to which a test measures what it has been designed to measure, expressed as a correlation coefficient.
Verbal Expression	Ability to express one's own concepts verbally in a discrete, relevant, and approximately factual manner.
Verticality (Verdicality)	Motor awareness of body and its parts as related to the pull of gravity.
Visual Association	The organizing process by which one is able to relate concepts presented visually.
Visual Closure	Ability to identify a visual stimulus from an incomplete visual presentation.
Visual Coordination and Pursuit	The capacity to effectively synchronize eye movements in following and tracking objects with the eyes.
Visual Figure-Ground Differentiation	The ability to differentiate the essential (figure) from the ground (nonessential) elements of a visual stimulus (see Figure-Ground, above).
Visual Fusion	The coordination of the separate images in the two eyes into one image.
Visual-Motor Coordination	Ability to relate vision with the movements of the body or its parts.
Visual Reception	Ability to gain meaning from visual symbols.
Visual Sequential Memory	Ability to reproduce sequences of visual items from memory.
WAIS	Wechsler Adult Intelligence Scale.
WISH	Wechsler Intelligence Scale for Children.
Word-Attack Skills	A pedogogical term that refers to a child's ability to analyze unfamiliar words by syllables and phonic elements and so arrive at their pronunciation and possibly recognize their meaning.

Word Blindness	Lack of ability to interpret words, which may be congenital or acquired; alexia.
Word Recognition	Process of identifying and understanding words.
Writing	Ability to express oneself through written language; an expressive language act; individual's capacity to express himself on paper; the act of constructing graphemes.
Writing, cursive	Longhand or script writing with letters joined.